MAURY'S GEOGRAPHICAL SERIES.

MANUAL

OF

GEOGRAPHY:

A

COMPLETE TREATISE ON MATHEMATICAL, PHYSICAL, AND POLITICAL GEOGRAPHY.

BY

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REVISED.

NEW YORK:
UNIVERSITY PUBLISHING COMPANY.
1880.

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PREFACE.

As the matured fruit of the author's earnest and protracted labors this work is now sent forth, an humble contribution to the cause of geographical education.

The time seems fully to have arrived when geography demands an honorable place among her sister sciences. Every scholar of the present day is aware of the increased and increasing need of geographical text-books which, while within the intellectual grasp of young pupils, shall be fitted to expand the minds of those more advanced in their studies; and to redeem the most delightful of subjects from the bondage of dry statistics, on the one hand, and, on the other, from the drudgery of vague generalities.

In the preparation of this volume, as in that of its two predecessors, no pains have been spared to lead the young geographer, by easy and gentle gradations to vantage-ground from which he may overlook and survey nature for himself, and where the enchantments of the prospect will constrain him to pursue his geographical inquiries with zeal and enthusiasm.

"The study of physical phenomena," to borrow the words of Humboldt, "finds its noblest and richest reward in a knowledge of the chain of connection by which all natural forces are linked together, and made mutually dependent on each other; and it is the perception of these relations that exalts our views and ennobles our enjoyments." While, therefore, the author has sought to reproduce in the pupil's mind the same vivid pictures of the various parts and places and objects of the globe which, as an eye-witness, he himself retains, he has constantly aimed at pointing out geographical laws, and at giving the learner glimpses into the terrestrial machinery, and frequent foretastes of the pleasures that await his after researches.

As regards the success which has attended the author's efforts to carry out his views in these pages, the public must now judge.

The teacher and scholar, however, are alike requested to mark the following statements, which present some features of the "Manual" and furnish directions for its most effective use in the class-room.

Map-Drawing from memory is felt to be a *necessity* to all who would know the surface of the earth as illustrated by maps. The study of geography without a knowledge of the map is mere groping in the dark.

* * * * * * * * * * * * *

Illustrations, drawn by the best artists of Europe and America, have been judiciously and lavishly inserted.

The Maps and the Map Studies are arranged to face each other.

The Map Studies are not mere questions on the map, but are among the most important pages of the book, on which the utmost care has been bestowed. To give them greater brightness and value, much pleasing matter has been thrown into them.

Pronunciation of difficult names has been generally given where they are first met with in the text; but there has been added at the close of the book a carefully compiled and judiciously selected Pronouncing Vocabulary.

Full Tables of Statistics have been appended to this work, but a large number of striking statistical data have been *interwoven with the text*.

* * * * * * * * * * * * *

The text has been broken up and marked by numbers and side-headings for convenience of reference.

A valuable Trade and Voyage Chart, exhibiting the great routes of commerce and their distances, the Ocean Telegraph Cables, the Currents of the Ocean, and the Winds of the different Zones, with descriptive text, will be found near the close of the book.

M. F. MAURY.

Washington, 1853.

PREFACE TO THE REVISED EDITION.

In view of the continuous progress of geographical science, the author of the "Manual" proposed, some time before his death, to revise the work. The plan of revision was fully decided upon, but death prevented the execution of his design.

In the revision which has now been made, the author's ideas have been steadily kept in view.

Among the marked excellences of the early edition, was its presentation of geography in the character of a science, rather than as an assemblage of disconnected facts. Land and air and ocean were treated as parts of a grand mechanism; rivers were discussed not simply as "divisions of water," but as having definite "offices" to perform; mountains were not merely masses of a certain altitude, but regulators of the rainfall. It was also carefully pointed out how the geographical position and climate of a country determine its industries. Trade was shown to be in a special manner under the influence of geographical law.

In the present edition these characteristic features have been studiously retained.

The numerous maps contained in this volume are unrivalled for beauty of execution and adaptation to the wants of the school-room. They have been prepared by an experienced chartographer, and have been engraved with the utmost care. In order to present the natural features of the earth's surface in an impressive and pleasing manner, beautifully colored Physical Maps have been introduced. A new Trade and Voyage Chart has been prepared, showing the prominent routes of commerce, and the leading exports of the various parts of the globe.

Many new and highly instructive illustrations have been added to those of the earlier edition, while the best appliances of modern typography have been employed, so as to render the mechanical execution of the work as nearly perfect as possible.

The subject of Map-Drawing has received careful attention. A sketch has been prepared, which is simple in principle and susceptible of the widest application.

The reviser is satisfied that the work, as now presented to the public, is in the shape in which the lamented author designed to put it. The changes made are such as have been rendered necessary by the progress of geographical science. The best and most recent authorities have been consulted, and the latest results of investigation and discovery have been presented.

Judging from his own long experience as an instructor, the reviser is confident that the "Manual" will prove eminently adapted to lighten the labor of the teacher, and to awaken the enthusiasm of the pupil.

MYTTON MAURY.

Annapolis, 1868.

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GEOGRAPHY.

I. GENERAL DEFINITIONS.

1. **Geography** is a description of the surface of the earth, and its inhabitants. It is divided into Mathematical, Physical, and Political Geography.

2. **Mathematical Geography** treats of the shape, size, and motions of the earth, the determination of positions and distances on its surface, and of its representation by globes and maps.

3. **Physical Geography** treats of the natural divisions of the surface of the earth, of climate, and the distribution of plants and animals.

4. **Political Geography** treats of the inhabitants of the earth, their customs and religions, their industrial pursuits, and forms of government.

Questions.—1. What is Geography? Its divisions? 2. Define Mathematical Geography. 3. Physical Geography. 4. Political Geography.

MATHEMATICAL GEOGRAPHY.

II. SHAPE AND SIZE OF THE EARTH.

1. **The Shape** of the earth is nearly that of a sphere or round ball. It does not appear round to us, because we see so small a part of it at a time.

EARLY THEORIES.—Philosophers suspected long ago that the earth was round, because in watching a ship departing from the shore, they observed that it sinks gradually below the horizon until the tips of the masts are all that can be seen.

Early navigators thought the earth must be round, because whenever they came in sight of land, they first saw the tops of trees or the summits of the mountains, while the land beneath lay concealed from view.

PROOFS.—In 1519, Ferdinand Magellan, a bold sailor of Portugal, proved these conjectures to be correct by actually sailing round the world.

Astronomers found further proof of their truth by noticing that the shadow cast by the earth, when it comes between the sun and the moon, so as to eclipse the moon, is always circular. Only a round body like an orange always casts a circular shadow.

But though the form of the earth was known to be spherical, its exact shape and size had to be determined by laborious calculation.

ACTUAL MEASUREMENT.—From measurements made in various parts of the world, it has been ascertained that the exact figure of the earth is that of an *oblate spheroid*.

A **spheroid** is a body like a sphere or globe. An **oblate spheroid** is a globe flattened at the poles, somewhat as an orange is at the stem, especially if it be slightly compressed between the finger and thumb.

2. **Size of the Earth.** The *Circumference* of the earth, or greatest distance round it, is nearly 25,000 miles.

The *Diameter* of the earth, or distance through its centre in a straight line, from any point on the surface to the point opposite, is nearly 8,000 miles. The polar diameter is 26½ miles less than the equatorial diameter.

The *Surface* of the earth contains about 197,000,000 square miles.

Questions. 1. What is the shape of the earth? Why does it seem flat? Give early theories about its shape. Proofs. What is the exact figure of the earth? Describe an oblate spheroid. 2. What is the circumference of the earth? Its diameter? What is the difference between the polar and equatorial diameters? Area of its surface?

III. MOTIONS OF THE EARTH.

1. Daily Motion. The sun is seen in the east every morning, and seems to cross the heavens and disappear in the west at sunset. The stars, in the same way, appear to rise in the east and sink in the west. This is not because the sun and stars go round the earth. They do not; they only appear to do so.

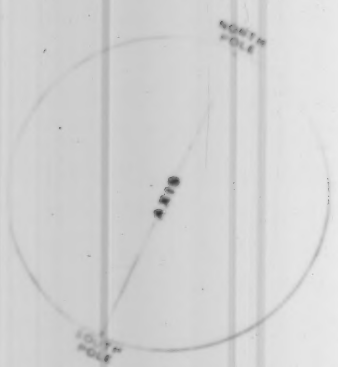
Illustration.—When we travel in the cars the houses and trees that we see seem to be moving past us, though we are really moving past them. They have an apparent motion opposite to the real motion of our train. So the sun and stars have an apparent motion opposite to the real motion of the earth.

DIRECTION.—The earth is constantly turning round (rotating) from west to east.

If an observer could watch our globe from the moon, and his eye first discern North and South America, these continents would in a few hours move out of sight, the Pacific Ocean would come into view, next, then the islands of Oceanica, followed by Australia, Asia, Europe and Africa, the Atlantic Ocean, and finally, America again.

TIME.—The time required for a complete rotation is a day of twenty-four hours.

AXIS.—The axis of the earth is the diameter about which it rotates. The ends of the axis are called the North and South Poles.



RATE.—The circumference of the earth at the equator is 25,000 miles. A man, therefore, near the equator moves toward the east at the rate of about one thousand miles an hour.

EFFECTS.—*Day and Night.*—The rotation of the earth causes day and night. The earth is all the time turning one-half of its surface toward the sun, and one-half away from it. The side which is turned toward the sun has day, the other has night.

Difference of Time.—It is this rotation of the earth which causes places to the east of us to have earlier time, those to the west, later time than we.

Liverpool time, for example, is about five hours earlier than that of New York. Liverpool being to the east of New York, is turned toward the sun sooner.

2. Yearly Motion.—In addition to the daily rotation, the earth has its ANNUAL REVOLUTION round the sun, which it accomplishes once in every 365¼ days, or, more accurately, 365 days, 5 hours, 48 minutes, and 50 seconds. This period makes a year.

EARTH'S ORBIT.—The path of the earth in its annual revolution is called its ORBIT. This orbit is nearly a circle. The mean distance of the sun from it is about 92,000,000 miles.

By doubling 92,000,000 miles we get the diameter of the circle that the earth annually describes in its course round the sun. This diameter multiplied by 3¼ gives us the distance travelled by the earth. If we divide this distance by the number of minutes in a year, we shall find that, in our annual journey round the sun, we are travelling at the rate of more than a thousand miles a minute.

A PLANE means a level surface like a floor.

If we imagine an immense plane passing through the centre of the sun, and reaching the orbit of the earth at every point, we have an idea of what is meant by the Plane of the Earth's Orbit.

The axis of the earth is inclined to the plane of its orbit 23½°.

APPARENT MOTION OF THE SUN.—The yearly revolution of the earth, combined with the inclination of the earth's axis, has the effect of making the sun *appear* to move northward and southward during each year.

It is owing to this apparent motion that we see the sun so far to the north in summer, and so far to the south in winter.

Questions.—1. Describe apparent daily motion of sun and stars. What really moves? Give illustration. What is the direction of the earth's daily motion? Time required for complete rotation? Define the axis and poles of the earth. What is the rate of the earth's rotation? What causes day and night? Why do places differ in time? Illustrate.

2. What other motion has the earth? What is a year? Define the earth's orbit. How far are we from the sun? How fast do we travel round the sun? What is a plane? How much is the axis of the earth inclined? Describe the apparent yearly motion of the sun.

IV. LATITUDE AND LONGITUDE.

1. The position of places on the earth is determined by means of circles supposed to be drawn upon its surface.

These imaginary circles mark off distances in the direction of north and south, and in the direction of east and west.

2. A Great Circle is any circle that divides the globe into two equal parts or hemispheres.

3. A Small Circle is any circle that divides the globe into two unequal parts.

Every circle is supposed to be divided into 360 equal parts called degrees, marked (°). Each degree is divided into 60 minutes, marked (′), and each minute into 60 seconds, marked (″).

4. The Equator is a great circle passing round the earth midway between the poles. It divides *equally* the surface of the earth. Hence its name.

5. Latitude.—Distance north or south of the Equator is called Latitude. It is expressed in degrees (°), minutes (′), and seconds (″).

Places on the Equator have no latitude. No place can have more than 90° of latitude, for no place can be farther from the Equator than the Pole is. Places north of the Equator are in north latitude, those south of it, in south latitude. The degrees of latitude are numbered on the sides of maps.

Those regions of the earth lying near the Equator are sometimes called *low latitudes*. *High latitudes* are those near the poles.

6. Parallels of latitude are small circles that pass round the earth parallel to the Equator.

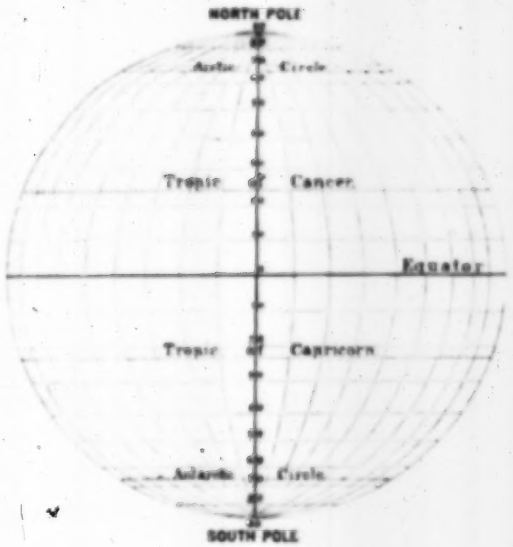
The lines that are drawn from east to west across maps are parallels of latitude. They serve to mark the divisions of north and south distance.

7. The Tropics are small circles parallel to the Equator, and 23½ degrees from it. The Northern is the *Tropic of Cancer*, the Southern, the *Tropic of Capricorn*.

They mark the *turning points* in the sun's annual journey. Tropic is derived from a Greek word, meaning to *turn*.

8. The Polar Circles are 23½ degrees from the poles. The one described about the North Pole is the *Arctic Circle*; the one about the South Pole is the Antarctic Circle.

These circles mark the farthest points to which the sun's light reaches when it is vertical at the tropics.



PARALLELS AND MERIDIANS.

9. Meridian Circles are great circles that pass through the poles. They mark off the entire distance east and west round the earth on any parallel into equal portions.

10. A Meridian is half a meridian circle. It extends from pole to pole.

Meridian means mid-day. When the sun reaches the meridian of a place it is noon there.

11. Longitude.—Distance east or west of a given meridian is called Longitude. It is expressed in degrees ( ), minutes ( ), and seconds ( ).

RECKONING LONGITUDE.—Longitude is reckoned from the *Prime*, or *First Meridian*.

A PRIME MERIDIAN is any meridian from which a nation may choose to reckon longitude. The English reckon longitude from Greenwich; the United States reckon *at sea* from Greenwich, and *on land* from Washington. If a place is east of the prime meridian, it is in East Longitude, and if on the other side, it is in West Longitude. The degrees of longitude are numbered on the top and bottom of maps.

Places *on* a prime meridian have no longitude.

No place can have more than 180° of longitude.

LENGTH OF DEGREES.—As all the meridians cross at the poles, and diverge or spread out thence till they reach the Equator, the distance between any two varies with the latitude. Therefore a degree of longitude is greater at the Equator than it is anywhere else.

A degree of longitude at the Equator is nearly 69.2 miles; these degrees diminish in length until we reach the pole, where there is no such thing as longitude.

TABLE

English Miles in a Degree of Longitude for every 5th Degree of Latitude from the Equator to the Pole.

Lat.	Miles.	Lat.	Miles.	Lat.	Miles.
0°	69.1	30	59.9	60	34.6
5	68.7	35	56.7	65	29.3
10	67.9	40	52.9	70	23.6
15	66.7	45	48.9	75	17.8
20	64.9	50	44.4	80	12.0
25	62.8	55	39.5	85	6.04

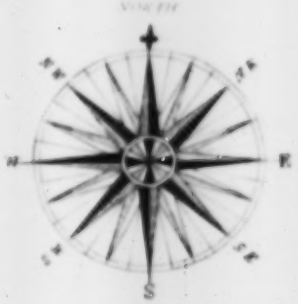
If the earth were a perfect sphere, a degree of latitude would be everywhere of just the same length. It may be so regarded. It is almost exactly the length of a degree of longitude at the Equator.

12. The convenience of using latitude and longitude may be readily shown.

If we were told that a ship was spoken at sea in latitude 40° north, for example, nobody could point out the place; but if we were told she was spoken in latitude 40° north, and longitude 30° west, we should understand that she was spoken at the very spot where the parallel of 40° north crosses the meridian of 30° west; and we should then see that the ship, when spoken, was in the Atlantic Ocean and near the Azores.

Without this mode of marking positions on the chart, navigators would never find their way across the seas.

They need, however, not only to know *where* they are, but *in what direction* they are going.



MARINER'S COMPASS.

THE MARINER'S COMPASS helps them to ascertain this. It consists of a card, which represents the horizon and its points, attached to a magnetic needle. This needle points toward the north.

The top of the card is marked "north," the right hand is marked "east," the bottom "south," and the left hand "west."

The four points—N., E., S., and W.—are called the *cardinal points*, that is, the principal points. Besides these there are other intermediate points, such as north-east, north-west, south-east, and south-west.

Questions.—1. How is the position of places on the earth determined? 2. What is a great circle? 3. Small circle? How are circles divided? 4. What is the equator? Why so called? 5. What is latitude? How much latitude can a place have? How little? 6. What are parallels? 7. The tropics? 8. Polar circles? 9. What are meridian circles? 10. Meridians? Why so called? 11. What is longitude? A prime meridian? How much longitude can a place have? How little? Are degrees of longitude all of the same length? Where are they longest? Do degrees of latitude vary in length? How long are they? 12. Explain the use of latitude and longitude? What is the mariner's compass? Its use?

V. CHANGE OF SEASONS.

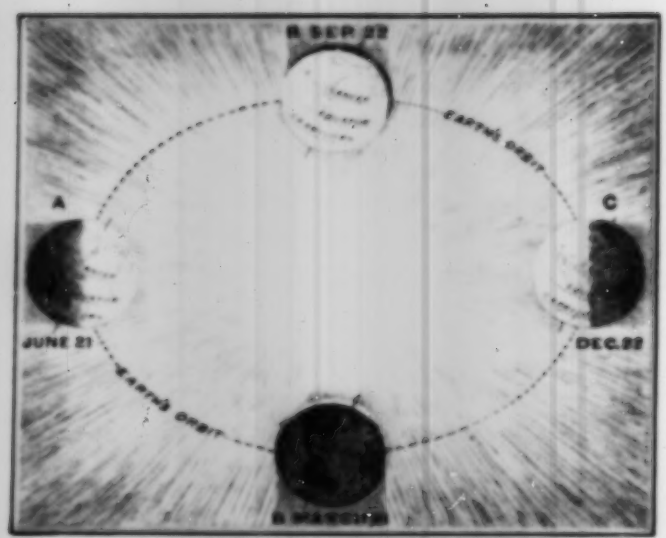
1. Inclination of the Earth's Axis. The axis of the earth is inclined to the plane of its orbit, as the axis of a top when it leans is inclined to the floor.

The top spins round on its axis, and at the same time travels round some point on the floor. It has thus two motions.

In like manner the earth turns round on its axis in daily rota-

tion, and, at the same time, travels round the sun in yearly revolution.

2. **Effect.** The inclination of the axis of the earth, combined with its revolution in its orbit, *causes the seasons*; for when the earth is in one part of its orbit, the *north pole* is turned toward the sun; when in the opposite part, the *south pole* is turned toward the sun.



The diagram illustrates this. When the earth is at A, the north pole is turned toward the sun, and the northern parts of the earth have their warm season. When, however, the earth is at C, the south pole is turned toward the sun, and the northern parts of the earth have their warm season.

To explain this more fully, we will consider the apparent motion of the sun from the Tropic of Capricorn to the Tropic of Cancer and back as real.

The diagram illustrates the apparent yearly motion of the sun, and the change of season. A, B, and C represent the sun in different positions. A is the north limit of his journey; C, the south limit. B is opposite the equator.

3. **Equinoxes.**—Twice every year day and night are equal in length. These times are called the Equinoxes (æquus, *equal*, nox, *night*). They mark the seasons of spring and autumn.

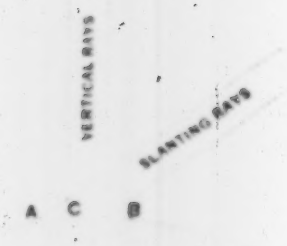
In passing northward from C to A, the sun crosses, or is opposite to, the Equator at B. This happens on the 21st of March every year. On that day the sun sets at the south pole, and rises at the north pole. At all other places it rises and sets at six o'clock; consequently the day and night are then equal. This is the VERNAL or SPRING EQUINOX.

Six months afterward—on the 22d of September—as the sun returns from the Tropic of Cancer to the Tropic of Capricorn, he again crosses the Equator. He now sets at the north pole and rises at the south. Day and night are again equal; and this time is called the AUTUMNAL EQUINOX.

4. **Solstices.** When the sun in his apparent journey reaches the most northerly point in summer, and the most southerly in winter, he appears to *stand still* for several days.

One of these "*stand-still*" places is called the *summer solstice*, the other the *winter solstice* (*sun-stand*).

SUMMER SOLSTICE.—On the 21st of June the sun reaches the summer solstice, or northern limit of his journey. He is now 23½ north of the Equator, on the Tropic of Cancer. At noon, therefore, his rays are vertical directly overhead to all places on or near that tropic. Consequently in all such places it is the *warm season* of the year.



The slanting rays are spread over the space AE. The same rays, when falling vertically, are limited to the smaller space CB.

WINTER SOLSTICE.—On the 22d of December the sun reaches the other solstice at the Tropic of Capricorn. He is now vertical at noon to all places on or near that tropic, and it is summer.

But at this time the rays of the sun fall slantingly and therefore feebly, on the northern part of the earth, because, as seen in the diagram of the Orbit of the Earth, that part now leans away from him. Therefore we in the northern hemisphere have our cold weather, and we call the December solstice the *winter solstice*. Having reached the winter solstice, the sun turns again toward the north.

5. **Seasons.** Thus the year is divided into seasons, and the seasons on the two sides of the Equator are opposite; that is, when it is winter with us in the northern part of the earth, it is summer with the people on the southern side of the Equator.

Questions. 1. Illustrate the inclination of the earth's axis. How is the earth like a spinning top? How does it differ from the top? 2. What is the effect of the inclination of the earth's axis? 3. How often are day and night equal every year? What are these times called? What seasons do they mark? Explain the vernal equinox. The autumnal equinox. 4. What are the solstices? When do they occur? Explain the summer solstice. The winter solstice. 5. What is said of the seasons?

VI. THE ZONES.

1. **Zones.**—The Tropics and the Polar Circles divide the earth's surface into five great belts or zones which differ in temperature. They are called the Torrid, the North Frigid, the South Frigid, the North Temperate, and the South Temperate Zones.

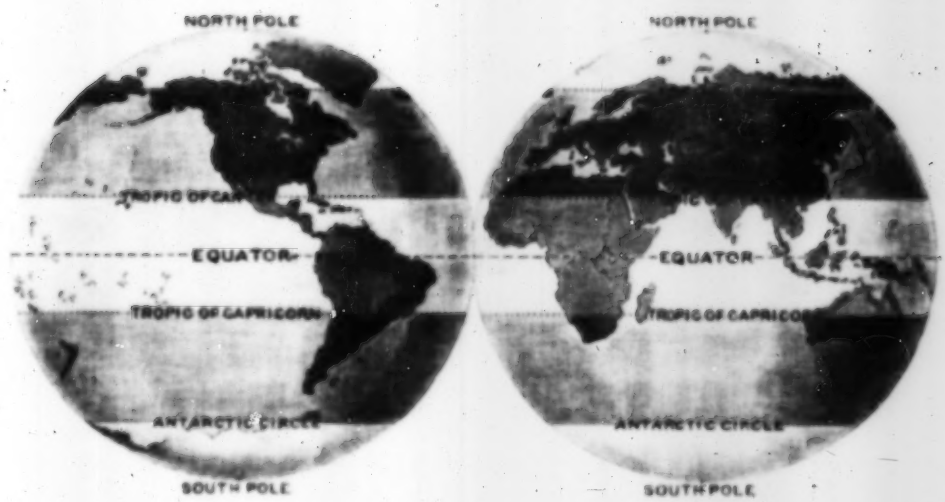
2. **The Torrid Zone.** The belt of the earth between the two Tropics is called the TORRID ZONE. It embraces two-fifths of the entire surface of the earth. These are the *tropical regions*.

the sun is vertical twice a year to all places within these re-
ons, and there is no cold weather; the people do not, as a rule,
en build chimneys to their houses. The year is divided into
o *seasons*—the *rainy* and the *dry*.

he sun is never vertical to any place north of the Tropic of Cancer nor to
any place south of the Tropic of Capricorn.

3. **The Frigid Zones.**—The space that lies between the Arctic Circle and the north pole is the NORTH FRIGID ZONE. The SOUTH FRIGID ZONE is between the Antarctic Circle and the south pole.

In these zones the summers are short, and the winters long, dreary, and severe. As we approach the poles, the days in summer become longer and longer, till at the poles there is but one day and one night during the whole year, each being six months long.



When the sun, in his apparent motion, goes south of the Equator after the 23d of September, darkness begins to settle down upon the North Frigid Zone. His light is still in the south, and here night reigns half the year with uninterrupted gloom.

At the time of the Vernal Equinox, when the season for his return draws near, the inhabitants of these icy lands anxiously look for him, and climb the mountains to catch a glimpse of his earliest beams. From this time, March 21, until September 22, when the sun again reaches the Equator, there is uninterrupted daylight at the pole.

These circumstances of day and night occur in reversed order in the South Frigid Zone.

The larger part of the area of these zones has never been visited by man, and we do not know whether they consist mostly of land or of water.

4. **The Temperate Zones.**—The region embraced between the Tropic of Cancer and the Arctic Circle is called the NORTH TEMPERATE ZONE. That between the Tropic of Capricorn and the Antarctic Circle is the SOUTH TEMPERATE ZONE.

In the Temperate Zones the year is divided into the *four seasons*—spring, summer, autumn, and winter.

A little more than half the earth's surface is contained in these two zones. The North Temperate Zone is the one in which we live. All parts of the United States, except the northern portion of Alaska, lie within it.

Questions.—1. Into what is the earth's surface divided by the tropics and polar circles? 2. Where is the Torrid Zone? How much of the earth's surface does it embrace? What is the temperature? How many seasons? 3. Where is the North Frigid Zone? Its climate? Its day and night? What is said of the South Frigid Zone? 4. Where are the Temperate Zones? In what zone do we live? Name its seasons. How much of the earth's surface is in the Temperate Zones?

VII. GLOBES AND MAPS.

1. **A Globe** is the most natural representation of the earth, because it is round. Upon its surface may be drawn the principal divisions of land and water and the earth's circles.

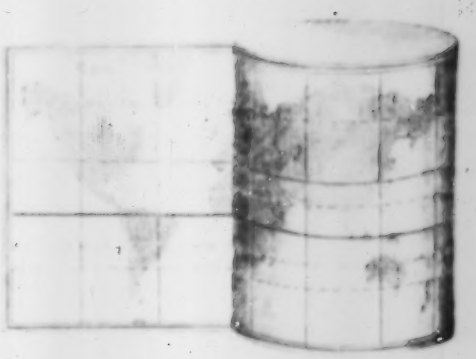
2. **Maps**, or representations of the earth on a flat surface, are more convenient than globes.

If we divide a globe into two equal parts, we have two *hemispheres* (*half spheres*). If these two parts are placed with their curved sides toward us, the entire surface of the globe can be seen at once. When, therefore, we wish to make a map of the world, we may do so by drawing the hemispheres, placing them side by side. (See Map of the World, showing the Zones.)

Maps may also be made to represent portions of the earth's surface, as continents, countries, or smaller sections.

Maps are so drawn that *north* is at the top, *south* at the bottom, *east* at the right hand and *west* at the left. The "scale of miles" on maps is used to ascertain the distance between places.

Various methods have been adopted for making maps. The maps used by navigators are made upon the plan invented by Mercator, a native of Belgium. They are known as Mercator's charts.



Mercator's chart distorts the surface it represents, as every chart must do that attempts to represent on a plane the surface of a sphere; but it distorts in such a manner as to make all places on it preserve their true compass from each other. This also makes it easy to take their true distance apart.

Questions.—1. What is a globe? How may it be divided? 2. What are maps? How can we make a map of the world? What part of the map is north? South? East? West? For what is a "scale of miles" used? Who was Mercator? By whom are his charts used?

PHYSICAL GEOGRAPHY.

VIII. NATURAL DIVISIONS OF THE EARTH.

1. **Land and Water.**—The surface of the earth is composed of *land* and *water*.

The land forms about one-fourth of the earth's surface; the water about three-fourths.

2. **Divisions of Land and Water.**—The land is subdivided according to form into Continents, Islands, Peninsulas, Capes, and Isthmuses.

According to elevation it is subdivided into Mountains, Plateaus, Plains, and Valleys.

The water is subdivided into sheets of various forms and sizes, named Oceans, Seas, Straits, Sounds, Bays, Gulfs, Harbors, Rivers, and Lakes.

These are called natural divisions.

Questions.—1. Of what is the earth's surface composed? How much is land? How much water? 2. Name the forms of land. The elevations. Name the forms of water. What are they called?

IX. THE LAND.

FORMS OF LAND.

1. **Continents.** There are six large masses of land called continents, viz., North America, South America, Europe, Asia, Africa, and Australia.

2. **An Island** is a body of land that is surrounded by water, as the British Isles, Madagascar, New Zealand.

A group of islands is sometimes called an **Archipelago**.

3. **A Peninsula** (*pene*, almost; *insula*, island;) is a portion of land that is *almost* surrounded by water.

Yucatan is a Peninsula. Arabia is a Peninsula. Portugal and Spain together form a Peninsula.

4. **An Isthmus** is a narrow neck of land connecting two larger bodies of land, as the Isthmus of Panama.

5. **A Cape, Point,** or **Headland,** is the extreme end of any land projecting into the water, as Cape of Good Hope, Cape Horn.

A high cape or headland is called a *promontory*. The Lizard, in England, is a *point*.

A **coast** or **shore** is the land bordering upon the water.

ELEVATIONS OF LAND.

6. **Mountains** are high elevations of land. **A Mountain Range** consists of a series of mountains. A number of ranges extending in the same general direction is called a **Mountain System**. **Hills** are lower elevations than mountains.

Offices of Mountains.—The cold tops of mountains condense the moisture which is brought by the winds from the sea, into rain or snow. Thus the mountains feed the rivers.

The snow and rain that fall upon the Rocky Mountains supply immense volumes of water to the Mississippi. The snow that crowns the Himalayas and gives them their name (*abode of snow*), with the rains that descend upon their slopes, feed the Indus, the Ganges, and the Brahmapootra. The great rivers of South America are fed by the melting snows of the Andes.

If the continents were entirely level, the winds would sweep across them from sea to sea without letting a drop of water fall upon the land.

By their slopes, also, mountains determine the course of rivers, and therefore are often called **water-sheds**, or "divides" of the water. Hills and low ridges also frequently serve as water-sheds.

The **height of mountains** is always reckoned from the level of the sea. We can measure the height of a mountain by means of a barometer. At the sea-level the quicksilver in the tube of the barometer stands at the height of 30 inches. Now as you carry the barometer up above the sea, in a balloon or up the side of a mountain, the quicksilver will fall in the tube about one-tenth of an inch for every 90 feet of perpendicular ascent.

7. **A Volcano** is a mountain which sends forth smoke and flames, ashes, steam, stones, and melted lava, through an opening called the *crater*.

Volcanoes are usually situated near the coast-line. There is a remarkable series of them extending from Tierra del Fuego to Alaska. The most active volcanic region in the world is in the East Indies. Java is the centre of it. This island has twenty-eight volcanic cones on a single plain.

Sometimes great injury is caused by volcanoes. Eighteen hundred years ago the cities of Herculaneum and Pompeii, in Italy, were covered with a deluge of ashes thrown from Mt. Vesuvius. They were buried about one hundred feet deep, and lost to view for centuries.

When a volcano ceases to emit flames, and is in process of extinction, it often sends out sulphurous gases, and deposits sulphur in large quantities; it then becomes a *solfatara*. Popocatepetl, in Mexico, is a solfatara.

8. **A Plateau**, or **Table-land**, is an elevated plain or broad mountain top, often broken or bordered by ranges of mountains.

The term *Highland* is often used to designate a region of considerable elevation. It may contain lofty mountain ranges; as the Pacific Highland in North America.

9. **A Plain** is a broad extent of nearly level land.

In North America, especially east of the Mississippi River, plains are called *prairies*; in South America *llanos* (lyah'nos), *pampas*, *selvas*, and in Asia *steppes*.

10. **A Valley** is the land lying between hills or mountains, or ranges of mountains.

11. **Deserts** are wide wastes of land, sometimes flat and sandy, sometimes hilly, or even mountainous, and generally destitute of vegetation and water.

Notwithstanding this, deserts are of great use in making other parts of the earth productive. An *oasis* is a fertile spot in the midst of a desert.

Questions.—1. What is a continent? 2. An island? A group of islands? 3. A peninsula? 4. An isthmus? 5. A cape or a promontory? 6. What are mountains? Ranges? Mountain systems? Hills? What are the offices of mountains? How is the height of mountains reckoned? 7. What is a volcano? A crater? Where is the most active volcanic region? What is a solfatara? 8. What is a plateau? A highland? 9. A plain? What are prairies? Llanos? Pampas? Steppes? 10. What is a valley? 11. What are deserts? Of what use are they? What is an oasis?

X. THE WATER.

1. **The Sea.**—All parts of the sea are really connected with each other, and form one sheet of water. For convenience, however, this one sheet is divided into five grand divisions called Oceans, viz., the Pacific, the Indian, the Atlantic, the Arctic, and Antarctic Oceans.

2. **A Bay, Gulf,** or **Sea,** is a sheet of water partly surrounded by land; as the Mediterranean Sea, Hudson Bay, the Gulf of Mexico.

A **Bight** is a name sometimes given to a bay; as the Bight of Benin.

3. **A Strait, Pass,** or **Passage,** is a narrow channel that connects two larger sheets of water; as the Strait of Gibraltar.

4. **A Sound** is a passage of water or strait not having much depth; as Long Island Sound.

5. **An Ocean Current** is a stream flowing through the ocean; as the Gulf Stream.

The Gulf Stream has its source in the Gulf of Mexico; its bed and its banks are cold water.

The temperature of its waters, as they pass the Strait of Florida, is often as high as 85°. They cross the Atlantic, carrying with them the warmth of summer even as far as the Orkney Isles, the ponds of which never freeze, though bordering on the parallel of 60° north.

6. **A Harbor** is a sheltered arm of the sea where ships may anchor and ride in safety.

7. **A River** is a stream of water formed by the union of smaller streams, which are called **branches** or **tributaries**.

The **source** of a river is the place where it begins. Its **mouth** is the place where it flows into some larger river, into a lake, or the sea.

The **bed** of a river is the land over which its waters flow.

The **right bank** of a river is that bank which would be on our right hand if we were going down the stream. The other is the **left** bank.

8. A river and its tributaries together form what is called a **river system**.

9. The **basin** or **valley** of a river is the country through which the river and its tributaries flow.

As rivers flow from the higher to the lower parts of a country, we can tell, by *observing the course* of the rivers, in what direction the land slopes.

Offices of Rivers.—Rivers are natural gutters or drains for carrying the water back to the sea after it has performed its manifold offices.

More clearly to understand the offices of rivers, let us follow in imagination the water which feeds them, from the time it comes from the sea as a vapor, until it returns to the sea again through the river. It has formed clouds to decorate the sky and screen the earth from the heat and cold; it has been condensed into rain, and refreshed the land with showers; it has fed the springs and wells; it has worn away the rocks, and gathered from them the materials of which sea-shells and coral are made; and while it has been doing all this, it has turned mills, driven machinery, floated ships, and carried the produce of the land to market.

10. **A Lake** is a body of water surrounded by land; as Lake Superior, the Great Salt Lake, Lake Victoria.

Questions.—1. What are the grand divisions of water called? How many oceans are there? Name them? 2. What is a bay, gulf, or sea? 3. What is a strait? 4. A sound? 5. An ocean current? What is said of the Gulf Stream? 6. A harbor? 7. A river? The bed of a river? Right bank? 8. What is a river system? 9. What is a river basin? How can you tell the slope of the land? The source of a river? The mouth? What are the offices of rivers? 10. What is a lake?

MAP STUDIES.

HEMISPHERES.

General Questions. — In what meridian circle have we here divided the earth into hemispheres? Ans. *In the 20th west of Greenwich (near London).* What circle divides the earth into a northern and southern hemisphere? Which hemisphere contains most land, the eastern or the western? Which the most water, the northern or southern?

Continents. — In which zone do you find the greatest proportion of land? Ans. *North Temperate.* What continents do you find in the western hemisphere? In the eastern? What continent lies partly in both? What continents lie wholly north of the Equator? Which are crossed by the Equator? By the Tropic of Cancer? Tropic of Capricorn? The Arctic Circle? Through what parts of Europe does this circle pass? How are North and South America united? Asia and Africa? What sea and strait separate Africa and Europe? In what direction does North America lie from Europe? From Africa? In what direction is Australia from Asia?

Islands. — In which ocean are most of the islands of the world? What important group off the western shores of Europe? What islands off the coast of Asia form a great empire? Ans. *The Japan Islands.* What large islands between Asia and Australia? Which is the largest island in the world? Ans. *Borneo.* What large island east of Africa? What group southeast of the United States? What group includes Behring Sea? Where is New Zealand? Ceylon? What island south of Australia? North?

Capes. — What is the most northerly cape of Europe? The most southerly of South America? The most southerly capes of Africa? The most easterly? The most southerly of India?

Mountains. — Where are the Rocky Mountains? The Andes? On what continent are the Alps? The Himalayas? Where are the Atlas Mountains? In what direction do the mountain ranges of the western hemisphere extend? Those of the eastern?

Deserts. — What are the two great deserts of the world? In which continents are they?

XI. THE HEMISPHERES.

1. If we divide the earth into hemispheres, as above, we have what are called the Western and Eastern Hemispheres.

2. The **Western Hemisphere** contains North and South America, and is called the NEW WORLD.

3. The **Eastern Hemisphere** contains Europe, Asia, Africa, and Australia.

Europe, Asia, and Africa are called the OLD WORLD, because in them the history of the human race began.

The Eastern Hemisphere has nearly twice as much land as the Western.

4. Asia and Africa are connected by the Isthmus of Suez, and North America and South America by the Isthmus of Panama.

Both of these isthmuses [illegible] continents together, and [illegible] vast commercial routes [illegible]

5. The earth's surface [illegible] tor into *Northern* and *Southern* [illegible]

6. Europe, Asia, and [illegible] Northern Hemisphere, [illegible] perate Zone.

Their coast-lines are [illegible] which greatly facilitate [illegible]

The Northern Hemisphere [illegible] tion, and power. It [illegible]

WORLD

IN

ISPHERES.

MAP STUDIES.

HEMISPHERES.

Oceans.—Which is the largest ocean? How much of the western hemisphere does it cover? Ans. *More than half.* For what is the Pacific remarkable? Ans. *For the number of islands contained in it, and for the belt of volcanoes that encircles it.* Between what continents is the Atlantic? What is remarkable about the Atlantic? Ans. *It is the only ocean which is widely open on the north. Moreover, it reaches, like a long valley, from pole to pole, and forms the only ready channel for the exchange of the polar and equatorial waters.* Which is west of North and South America? Which is east? Which is north of North America? Which is west of Europe? South of Asia? For what is the Indian Ocean remarkable? Ans. *For the violent hurricanes which sweep over its waters.* What ocean, east of Asia? North? East of Africa?

Seas, Bays, and Gulfs.—Where is the Sea of Japan? The China Sea? Bay of Bengal? Arabian Sea? Red Sea? Mediterranean? Gulf of Guinea? Caribbean Sea? Gulf of Mexico? Behring Sea? Hudson Bay? In what oceans are the largest Sargasso Seas? What are these? Ans. *Immense areas of the ocean covered with seaweed.*

...a and South America by ...

...ous because they run large ... because they furnish impor... great oceans and seas.

...also divided by the Equa... Hemispheres.

...rth America lie in the ... are chiefly in the Tem...

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7. The southern continents are South America, Africa, and Australia. They lie principally in the Torrid Zone.

Compared with the other continents, they are marked by lack of coast indentation, and hence do not afford the same facilities for commerce.

Questions.—1. Into what hemispheres is the earth divided by the 20th meridian? 2. What continents are in the Western Hemisphere? What are they called? 3. What does the Eastern Hemisphere contain? What is meant by the Old World? Why is it so called? Which hemisphere contains the most land? 4. How are Asia and Africa connected? North and South America? What makes these isthmuses famous? 5. How does the Equator divide the earth? 6. What continents does the Northern Hemisphere contain? In what Zone are they? What is said of their coast-lines? Which is the commercial hemisphere? 7. Name the southern continents. In what zone are they?

Lakes and Rivers.—What great lakes in Africa? Western Asia? *The Caspian and Dead Seas are lakes.* Where are the great lakes of the western hemisphere? Where is the Amazon? Mississippi? In what directions do these flow? Where is the Nile? Yenesei? Yang-tse-kiang?

Voyages.—On what oceans would you sail in going from America, in a south-eastwardly course, to Australia, thence to California? What oceans would you sail on in a voyage from New York to California, by way of Cape Horn? From New York to China, by way of the Cape of Good Hope? From Cape Horn to the Cape of Good Hope?

Latitude and Longitude.—Where would a ship be if she had no latitude and no longitude? Suppose a ship in latitude 20 north, longitude 160 west, what islands is she near? Suppose a ship in longitude 160 east, latitude 30 south, and sailing westward, what coast is she nearing?

XII. WINDS.

1. **Winds** are currents of air. They are caused by one part of the atmosphere becoming hotter than another. Whenever this takes place, the air moves.

If a fire is kindled in a fireplace or stove, the air in the fireplace or stove is heated, becomes lighter, and is pressed up the chimney or stovepipe by the cooler, heavier air of the room. The air now flows steadily from all parts of the room toward the fireplace or stove.

The rays of the sun are like such a fire. They are always heating the air more in some places than in others. At the Equator and within the tropics they fall vertically, and consequently the air within the tropics is hotter than elsewhere.

Hence, like the air in the fireplace, it constantly rises, being pressed upward by currents of cooler air which are always flowing in from the colder regions north and south.

2. **Trade-Winds.**—Thus there are two cold currents of air always flowing from the poles toward the Equator. Within the tropics these become surface-winds. Owing to the revolution of the earth from west to east, the current from the north pole becomes a north-east wind, and the one from the south pole a south-east wind. These are the constant winds, called, from their value to commerce, the Trade-Winds.

3. **The Counter-Trade-Winds.**—The heated air rising within the tropics flows in two currents toward the poles in a direction opposite to that of the Trade-Winds. These return currents are the Counter-Trade-Winds.

As they proceed toward the poles they gradually become cooler and heavier, they descend, and in the temperate regions become surface-winds. In the northern hemisphere they come from the south-west, and in the southern hemisphere from the north-west.

4. **Land and Sea Breezes.**—All along the sea-shore of warm countries there is a breeze from the sea by day, and one from the land by night.

The land is heated more readily than the sea, and at night it cools more rapidly.

During the day the air above the land becomes hotter than that above the water. A current of warm air ascends over the land, while currents of cooler air flow in from the sea. Thus we have the *sea-breeze*.

During the night the air over the land having become cooler than that over the sea, the current sets toward the sea, and thus we have the *land-breeze*.

5. **Monsoons** are land and sea breezes on a grand scale. Instead of alternating with day and night, they alternate with summer and winter, and blow for months at a time.

The most famous are those of India. The sun's rays beat with intense force upon the desert regions of Asia. The hot air rises in a mighty current, and there is an inrush of cooler air from the Indian Ocean toward the land.

6. **Office of the Winds.**—The winds are great water-carriers, whose duty it is to refresh the thirsty earth.

As they course over the surface of the sea, they gather up vast quantities of vapor, which they drop down as rain upon the land.

Questions.—1. What are winds? How are they caused? Give an illustration. What portion of the earth is hottest? How does this heat affect the air? Where does the cold air come from to take its place? 2. What is said of the trade-winds? What is their direction? 3. What are the counter-trades? What is said of them? 4. How is the sea-breeze caused? The land-breeze? 5. What are monsoons? The most famous? 6. The office of winds?

XIII. CLIMATE.

1. **Climate** is the combined effect of heat and moisture.

It depends upon latitude and elevation above the level of the sea, distance from the sea, the prevailing direction of the winds, and the flow of ocean currents.

2. **Effect of Latitude.**—The nearer the Equator, as a rule, the warmer the climate; because the Torrid Zone is the region of vertical sun-rays.

From the Equator toward the poles the climate gradually grows colder, until we reach the regions of perpetual snow and ice. Between these regions and the Torrid Zone lie the Temperate Zones, which have a comparatively moderate climate.

Besides having a higher temperature, the Torrid Zone has a greater rainfall than any other portion of the earth.

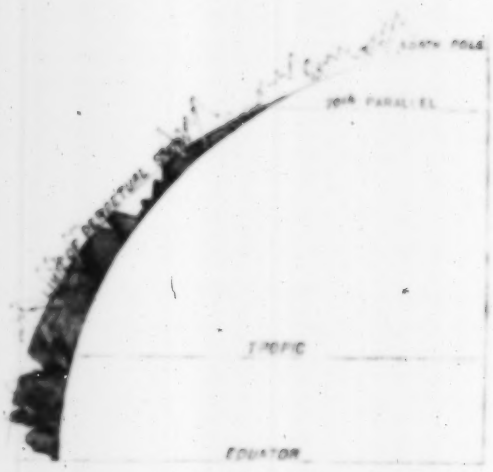
Over this zone, with a breadth of about 1,000 miles and extending round the earth, hovers the Equatorial Cloud-Ring. This consists of the vapor brought together by the north-east and south-east trade-winds where they meet.

The cloud-ring follows the course of the sun in his apparent journey between the tropics, and brings the *rainy season* to those places which are under it. When it has passed beyond the latitude of any place, the *dry season* of that place begins.

3. **Effect of Elevation.**—The temperature on the top of a mountain is lower than at its foot.

Illustration.—If we heat a cannon-ball and a grape-shot, two things are clear: 1st, that the grape-shot will absorb far less heat than the cannon-ball; and 2d, that it will part with its heat by radiation far sooner. The general mass of the earth is like the cannon-ball, the mountain-top is like the grape-shot.

There is in all latitudes a line of elevation above which the cold is, at all seasons of the year, sufficient to congeal the moisture of the air and form snow. This line is called *the Snow-Line*. The snow-line at the Equator (as shown in the diagram) is 16,000 feet above the sea; so that there are mountains in the Torrid Zone on the tops of which the weather is like that of the Arctic regions.



The peak of Antisana, in South America, although under the Equator, rises so high as to reach perpetually frozen regions.

In descending these snow-capped mountains in the tropics, we experience, in a ride of a few hours, all the changes of climate that would be felt in travelling from Spitzbergen to Cuba in a single day.

4. Effect of Sea Winds. The ocean is warmer in winter and cooler in summer than the land. Countries, therefore, in which the prevailing winds come from the sea have warmer winters and cooler summers than might be expected from their latitude.

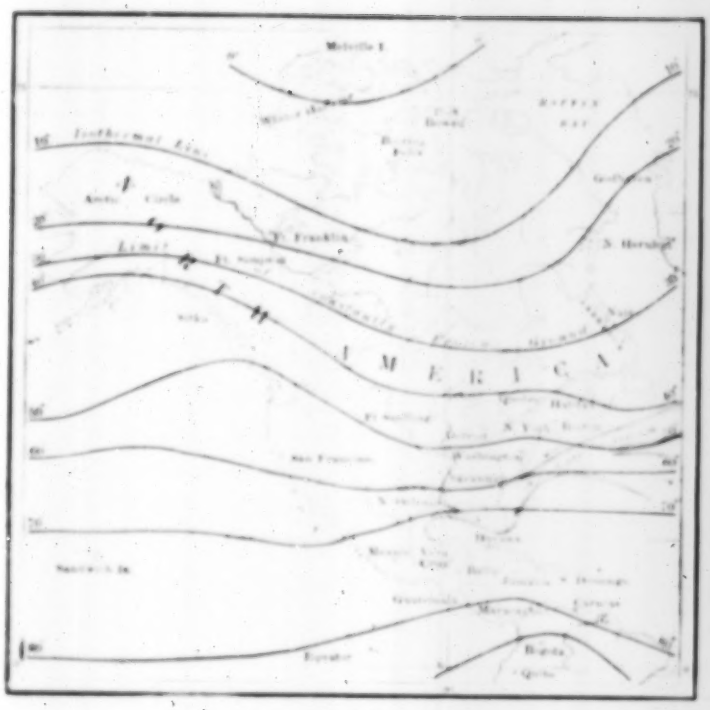
The island of Great Britain and the province of Labrador lie between the same parallels of latitude. Yet such is the difference of climate between them, that while in England the pastures are green all the year, Labrador is so cold as to be almost uninhabitable.

In the British isles the winds come from the ocean. They are loaded with moisture and warmth from the Gulf Stream. In Labrador they come from the land, and are dry and cold. Again, the climates of Oregon and British Columbia are mild, because the prevailing winds come from the Pacific Ocean.

Large bodies of fresh water also, such as the Great Lakes, modify climate. Southern Michigan owes its comparative mildness to this cause. The biting west winds are tempered as they sweep over Lake Michigan.

5. Isotherms (iso-s, *equal*; thermos, *heat*) are lines drawn through all places having the same average temperature.

The figures attached to them on the map indicate the average temperature during the year.



The striking *bend* of these isotherms is due to the combined agency of the winds, of the great currents of the ocean, of the presence of moisture in the air, and height above the sea's level.

The isotherm of New York, immediately on leaving the Atlantic coast, is bent southward by a cold Arctic current; but the warm Gulf Stream inclines it northward toward Europe, and it comes out on the other side of the Atlantic 1,500 miles farther north than New York.

6. Industries and Climates.—The geographical distribution of *agricultural* labor is almost wholly determined by climate. There are other industries, however, such as mining and manufacturing, that are, to a certain extent, independent of climate.

Wherever the sea, or the factory, or the forest is more remunerative than farming, the laboring man abandons the cultivation of the soil.

7. Rule for Labor.—As we recede from the warm climates of the South, and approach the cold regions of the North, human labor becomes less and less agricultural, and the occupations of man more and more diversified.

It is in obedience to this law that the Northern States are more devoted to manufactures, commerce, and seafaring than the Southern States.

Questions.—1. What is climate? On what does it depend? 2. What is the effect of latitude? What is said of the moisture of the torrid regions? What is said of the equatorial clouds-ring? 3. What is the effect of elevation? Illustrate. What is the snow-line? 4. What is the effect of sea winds? Compare Great Britain and Labrador. Why have Oregon and British Columbia such a mild climate? What gives Southern Michigan a comparatively mild climate? 5. What are isotherms? What is said of the isotherm of New York? 6. How is labor affected by climate? 7. What geographical rule regarding labor does this lesson teach?

XIV. PLANTS AND ANIMALS.

1. The earth is clothed with vegetation and animated with living creatures: these are called its *Flora* and its *Fauna*.

2. **The Geographical Range of a Plant** is the extent of the earth's surface within which that plant will thrive in the open air. Each kind of plant has its special geographical range: for its growth depends upon *light*, *heat*, and *moisture*.

Thus the coniferous tree, the india-rubber tree, and the pineapple are confined to the Torrid Zone, where the great heat and excessive moisture produce the most luxuriant vegetation; while hemp, flax, and buckwheat find their home in the Temperate Zone.

3. **Torrid Zone.**—The richest fruits, the most brilliant flowers, and the greatest variety of useful plants are found in the Torrid Zone.

The following are peculiar to it: the coffee-tree, the banana, the pineapple and the palm, the bread fruit and the mango, india-rubber and gutta percha, the cinchona and the aloe.

4. **Temperate Zones.**—In the Temperate Zones we find the grains (wheat, corn, rye, oats, and barley), with hemp, flax, and many other useful plants. Among the trees are the beech and the chestnut, the elm, oak, maple, and many fruit-trees.

5. **Frigid Zones.**—The vegetation of these zones consists chiefly of lichens and mosses. None of the great agricultural staples, except perhaps barley, will grow there.

6. **Animals**, like plants, have their geographical range. In the *Torrid Zone* we find the largest and most powerful land animals, as the elephant, lion, and tiger; in the *Temperate Zone*, the animals most useful to man, as the horse, the ox, and sheep; in the *Frigid Zone*, the polar bear, the reindeer, and the walrus.

7. **Geographical Range of Man.**—Man, unlike other animals, can live almost everywhere, in the Hot and in the Frigid Zone, in the depth of the mine and on the mountain top.

The city of Pasco, among the Peruvian Andes, is nearly three miles above the sea.

Latitude 55, we find, in Siberia, the large and flourishing cities of Obdorsk, Tomsk, and Tobolsk; while in Russia, Moscow, in about the same latitude, has 350,000 inhabitants. St. Petersburg itself, on the parallel of 60° north latitude, contains more than 500,000 inhabitants. Hammerfest, in Lapland, is within the Arctic Circle.

Questions.—1. What do you mean by the flora of a country? The fauna? 2. What is meant by the geographical range of a plant? Upon what does its growth depend? Which zone has the most luxuriant vegetation? Why? 3. Name some of the plants of the Torrid Zone. What is said of the flora of this zone? 4. Name some of the trees and plants peculiar to the Temperate Zones. 5. What is said of the Frigid Zones? 6. Where are the largest animals found? Name some of them. Where are the most useful animals found? What are they? What are the animals of the Frigid Zone? 7. What is the range of man? How high is it? What is said of the population of Siberia? Where is Hammerfest?

POLITICAL GEOGRAPHY.

XV. MAN.

1. **The Human Family**, which consists of about 1,400 million persons, may be divided, according to the different social conditions of men, into four classes, viz.: the *savage*, *barbarous*, *civilized*, and *enlightened*.

2. **Savages** have no knowledge of the arts.

They live by hunting and fishing, and wear the rudest kind of clothing. Some of them seem ignorant of the difference between right and wrong.

3. **Barbarous** nations have made a little progress beyond the savage. Some of them, like the Arabs, live in tents and lead a wandering life.

They are often called Nomadic from a word meaning pasturage, because as soon as the grass in one place has been eaten by their flocks they move to another. Some are acquainted with agriculture and the simpler arts.

4. **Civilized** nations, like the Chinese, live in towns and cities, understand many arts, have a written language, and have made considerable advancement in intelligence and morality.

5. **Enlightened** nations, such as the English and the French, carry on commerce extensively, and by constant intercourse with each other improve rapidly.

They employ machinery on a vast scale. They establish schools and other institutions of learning, and their systems of government are arranged so as to secure the good of all rather than to gratify the will of a few.

6. **Races.**—Men are also classified, according to form, feature, and color, into five great races: the *Caucasian*, the *Mongolian*, the *Malay*, the *American Indian*, and the *Ethiopian*.

7. **The Caucasian** or **White race** had its origin in the western part of Asia. All the nations of Europe, except the Lapps, Finns, Turks, and the Magyars of Hungary, belong to this race. The descendants of Europeans have spread over the world, and now both Americas are governed by them.

The members of this race are the most enlightened and the most enterprising of the races, and are rapidly colonizing, civilizing, and christianizing the world.

European Malay American Negro

8. **The Mongolian** or **Yellow race** occupies a large part of Asia, and includes the Esquimaux of America, and the Lapps, Finns, Magyars, and Turks of Europe. The leading nations belonging to this race are the Japanese and Chinese.

They are ranked as civilized rather than enlightened, for while they show much intellectual power, they have in general but little enterprise.

9. **The Malay** or **Brown race** occupies most of the islands of the Pacific, but is giving way before European colonists.

The color of the Malays varies from olive-yellow to black. They are fond of the sea, and given to piracy.

10. **The American Indians** or **Red race** are tall, erect, and copper-colored.

They are mostly savages, but there are remains of ancient civilization in many parts of the New World. They are rapidly disappearing.

11. **The Ethiopian** or **Black race** is found chiefly in Africa, where it is in a savage state. Its descendants in America are civilized.

Questions.—1. What is the population of the world? How is the human family divided? 2. What are savages? 3. What are barbarous nations? 4. Civilized? How do civilized differ from barbarous? 5. What is said of enlightened nations? 6. Into how many races are men classified? What are they? 7. What is said of the Caucasian? 8. Mongolian? 9. Malay? 10. American Indian? 11. The Ethiopian, or black race?

XVI. RELIGIONS.

1. All people have some kind of religion. The principal forms of religion are—*Christianity*, *Judaism*, *Mohammedanism*, *Buddhism*, *Brahminism*, and the religion of the *Guebres* (*Gue'bres*).

2. **Christianity.**—Christians believe in the Bible as the Word of God, and in Jesus Christ as the Son of God. All the nations of America, and all those of Europe, except Turkey, profess the Christian religion.

In Asia and Africa there are some Christian communities, but the only States in these continents in which Christianity is the national religion is *Liberia*. Only about one-fourth of the inhabitants of the globe profess the Christian religion.

3. **Judaism.**—The Jews believe in the Old Testament, but not in the New.

4. **Mohammedanism.**—The Mohammedans believe that "There is one God, and Mohammed is his Prophet."

The Al-co'ran was written by Mohammed about 600 years after Christ. It is the Bible of his followers.

The Turks, Arabs, and Persians, and many other inhabitants of Asia and Africa, are Mohammedans.

5. **Buddhism.**—Buddha was the founder of this religion. His followers, who comprise nearly one quarter of the entire human family, do not believe in any God.

The majority of the people of South Eastern Asia are Buddhists.

6. **Brahminism.**—The Brahmins are very numerous. They hold sway in India, from which they drove most of the Buddhists by persecution.

They have deities, some of which, according to their doctrines, have previously been incarnate, sometimes as men with many hands, or as beasts with many heads. *Juggernaut'* is one of their most famous idols.

7. **The Guebres.**—These are the followers of *Zoroaster*. The sun and fire are with them emblems of the Deity.

They are the so-called fire-worshippers of Persia and India.

Questions.—1. Name the principal forms of religion. How many are there? 2. What do Christians believe? Which two continents are inhabited chiefly by Christians? Do you find many Christian communities in Asia and Africa? 3. What is said of the Jews? 4. What is the great doctrine of the Mohammedans? What is the Koran? Who wrote it? Name some Mohammedan nations. 5. What is said of Buddhism? 6. Of Brahminism? What is Juggernaut? 7. What is said of the Guebres? Where are they found?

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XVII. INDUSTRIAL PURSUITS OF MAN.

1. Man requires food, raiment, and shelter. To secure them he resorts to various occupations.

2. **Industrial Pursuits.**—The leading occupations or industrial pursuits are agriculture, seafaring, mining, manufacturing, and commerce.

AGRICULTURE includes tilling the earth to obtain useful plants, and GRAZING, or the raising of flocks and herds.

SEAFARING includes fishing and navigation.

MINING is the raising of valuable ores and minerals from the earth, and refining them.

MANUFACTURING is the working up of all sorts of raw material, so as to bring them into more useful shapes.

An important department of manufacturing is LUMBERING—that is, the cutting of forest trees and preparing the timber for use.

COMMERCE includes buying and selling, and the exchanging of the products of one country, or section, for those of another.

3. **Why Industries Vary.**—All industries depend upon climate, and upon the natural resources, situation, and wants of the country.

In Louisiana, for example, the cultivation of the sugar-cane is an important branch of industry.

In New England the cutting and gathering of ice from the ponds in winter, and the sending of it to different parts of the world, is an important industry.

There are no ice-ponds in Louisiana and no cane-fields in New England, simply because climate forbids. For this reason the industries of these sections differ.

HOW COAL AFFECTS INDUSTRIES.—Great Britain abounds in coal. For this reason her people are largely engaged in manufactures.

It took one hundred thousand men, Herodotus says, twenty years to build the Great Pyramid in Egypt. It takes Great Britain only nine days to raise coal enough to make a pile just as large. In a single year she has raised more than one hundred millions of tons of coal. The greater part of this coal is used by her people in manufacturing.

If you reflect that there is in one pound of coal power enough to do as much work in one hour as ten able-bodied men can do in a day, we shall not be surprised to hear that the island of Great Britain, though not half so large as California, contains about fifty times as many people as that State, and that they sell annually to other nations manufactured goods worth more than one hundred thousand millions of dollars!

Questions.—1. What does man require? 2. What are the leading industrial pursuits? What is agriculture, grazing, seafaring, mining, manufacturing, commerce? 3. On what do industries depend? Compare Louisiana and New England? Why are the English so largely employed in manufacturing? How much coal does Great Britain use in manufacturing? What is the value of her manufactured exports?

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XVIII. GOVERNMENTS.

1. **Government and its End.**—All people require government of some sort, otherwise the strong will oppress the weak.

2. **Kinds of Government.**—Civilized governments of the present day may be reduced to two kinds—the Republican and the Monarchical.

3. **A Republic** is a State in which the President, or head of the government, is elected by the people to serve for a certain time. The laws are made by representatives also chosen by the people.

4. **A Monarchy** is a government in which the ruler inherits his office and holds it during life.

Of *monarchies* there are two kinds: **Absolute**, in which the will of the sovereign is the supreme law of the land, and **Limited**, in which the laws are made by representatives of the people.

Russia and Turkey are *absolute* monarchies; all the other monarchies of Europe are *limited*.

A monarchy may be a Kingdom, or an Empire. The sovereign is called an Emperor, King, or Queen.

Questions.—1. What is the use of government? 2. How many kinds are there? 3. What is a republic? 4. A monarchy? How many kinds of monarchies? Define them. How are the States of Europe governed?

NORTH AMERICA.

MAP STUDIES.

PHYSICAL NORTH AMERICA.

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Outline.—What three oceans surround North America? What great ocean current on the western coast? What one on the south-eastern coast? What is its direction? What great current passes toward Newfoundland from the Arctic regions?

What great bay indents the northern part of the continent? What peninsula east of it? What gulf south of Labrador? By what great gulf is the south-eastern coast indented? What peninsulas nearly inclose it? What channels lead to it?

What is the general direction of the Atlantic coast? Of the Pacific? What large peninsula forms the north-western extremity of the continent? What strait separates Asia and North America? What gulf indents the western coast? What peninsula west of this gulf? What archipelago off the northern coast?

What land east of Baffin Bay? What island east of Greenland? What islands between North and South America? Name the four largest. In what zone do they lie? What sea to the south of these islands? What island east of the Gulf of St. Lawrence? What isthmus unites North and South America?

Surface.—What does the dark green color on the map represent? The light green? The buff? The dark buff? Judging from the color, is most of the continent high or low? What is the most elevated portion of the continent? Where does the lowland chiefly lie?

What is the central portion of the continent called? What elevation of land divides this plain? Name the southern portion of the Central Plain? What ocean on the north, and what gulf on the south of this plain?

What highland near the eastern coast? What mountains does it contain? Their general direction? Name the region between the Atlantic Highland and the sea. What great highland region in the western part of the continent? What great mountain system does this region contain? What is its general direction? From what isthmus to what ocean does it extend?

Rivers and Lakes.—What great river with its tributaries drains the southern part of the Central Plain? Upon what elevation does it rise? In what direction does it flow? What are the principal rivers draining the northern portion of the great Central Plain? Into what ocean and bay do these rivers flow?

What lakes are drained by the St. Lawrence? In what direction does this river flow? Name the chief rivers of the Pacific Slope. In what general direction do the rivers of the Atlantic Slope flow?

NOTE.—*Dotted lines will be seen on the map marking the limits beyond which certain products are not found.*

Vegetation and Animals.—Trace the northern limit of trees. It starts from the shores of Norton Sound in Alaska. What grow to the north of this line? How far north do barley, oats, and flax grow in the western part of the continent? In the central portion? In the eastern portion? How many degrees farther north do they grow on the Pacific than on the Atlantic side?

Trace the northern limit of wheat; of maize. Judging from these lines, which side of the continent has the milder climate? How do you account for the difference? Where does the line pass, south of which there is seldom any snow?

Where do we find the whale? The walrus? The seal and sea-otter? The eider-duck? The cod, mackerel, and herring? From what waters do we get sponges, coral, green turtle? On what part of the continent are fur-bearing animals found? Where do we find the buffalo, antelope, reindeer?

MAP DRAWING.—*Full, practical directions for map drawing, with easily formed construction diagrams, will be found on pages 127—132.*

NORTH AMERICA
PHYSICAL MAP
SCALE OF MILES
UNEXPLORED REGION
GREENLAND
BAFFIN BAY
HUDSON BAY
LABRADOR
NEWFOUNDLAND
GREAT CENTRAL PLAIN
MISSISSIPPI VALLEY
ATLANTIC HIGHLAND
GREAT BASIN
GULF OF MEXICO
BAHAMA ISLANDS
WEST INDIA ISLANDS
CARIBBEAN SEA
CENTRAL AMERICA
SOUTH AMERICA
EQUATORIAL COUNTER CURRENT
Plains
Low land
Green
Dark Green
Low Plateau
High Plateau
Buff
Dark Buff
Longitude
from
Washington
West
East

XIX. GENERAL DESCRIPTION.

1. North America stretches from the Arctic regions to the Torrid Zone, and embraces a great range of latitude, diversity of climate, and variety of vegetable productions.

2. **Surface.**—The continent is divided into three great sections: I. The Atlantic Slope and Highland; II. The Great Central Plain; III. The Pacific Highland and Slope.

3. **The Atlantic Slope** is the country lying between the ocean and the Appalachian Mountains.

4. **The Atlantic Highland** comprises the ranges known as the Appalachian Mountains. These extend from the Gulf of St. Lawrence nearly to the Gulf of Mexico.

5. **The Great Central Plain** reaches from the Arctic Ocean to the Gulf of Mexico. It lies between the two Highland regions.

Near the head waters of the Mississippi this plain is crossed by a low ridge called the "*Height of Land*," which divides it into two great slopes. One inclines to the north, and sends its waters into the Arctic Ocean; the other to the south, draining the Valley of the Mississippi.

From Minnesota the "Height of Land" may be traced northeast of the Great Lakes toward the Atlantic. The highest point is reached in Minnesota, where the source of the Mississippi is reached above the sea-level.

6. **The Pacific Highland** includes the Rocky Mountains and the elevated Plateau lying between these mountains on the one side, and the Sierra Nevada and Cascade Ranges on the other. It extends from the Isthmus of Panama to the Arctic Ocean.

Between this Highland and the Pacific Ocean lies the **Pacific Slope.**

7. **Rivers and Lakes.**—North America is abundantly watered. Its rivers and lakes are among the largest in the world.

More than half of all the fresh water on the globe is contained in its lakes.

The Mississippi and its numerous tributaries traverse the southern slope of the Great Plain.

The Missouri and the Lower Mississippi together form the longest watercourse in the world. Its length is more than 4,000 miles.

The St. Lawrence drains the Great Lakes and flows into the Gulf of St. Lawrence.

The rivers of the eastern slope of the Appalachian Mountains all enter the Atlantic Ocean or the Gulf of Mexico.

Those of the Pacific Plateau are the Yukon, which flows into Behring Sea and is navigable for 1,500 miles; the Columbia and the Colorado entering the Pacific; and the Rio Grande which flows into the Gulf of Mexico.

The Mackenzie, the Saskatchewan, and the Nelson drain the northern portion of the Central Plain and flow into the Arctic Ocean or into Hudson Bay.

Questions.—1. How far does North America extend toward the north? How far does it extend toward the south? What gives this continent its great diversity of climate and variety of production? 2. How is the surface of North America divided? Name the divisions? 3. Describe the Atlantic Slope? 4. Where is the Atlantic Highland? What mountains does it contain? 5. What is the extent of the Great Central Plain? By what is it divided? What is said of the two slopes? Of the basin of the Great Lakes? 6. Describe the Pacific Highland. The Pacific Slope? 7. What is said of the rivers and lakes of North America? Of the Mississippi and its branches? The St. Lawrence? The rivers of the Appalachian Mountains? Pacific Plateau? Arctic Slope?

MAP STUDIES.

POLITICAL NORTH AMERICA.

General Questions. What country occupies nearly all of the northern part of North America? What country north-east of British America? What south? What country south of the United States? What south-east of Mexico?

Danish America (belongs to Denmark).—Of what does Danish America consist? Name the capital of Iceland. What town lies within the Arctic Circle? Where is Reykjavik? Where is Cape North? Cape Farewell?

British America.—What is the principal division of British America? What island and province form the other division? What mountain range in the western part of British America? What lakes are drained by the Mackenzie River? The Nelson?

What lakes on the southern border of the Dominion of Canada? Where is Cape Race? Cape Sable? Bay of Fundy? Grand Bank? Two islands on the Pacific coast? Where is the Magnetic Pole? What is the capital of the Dominion? What cities on the St. Lawrence? Where is Halifax?

United States.—Bound the United States. What peninsula on the south-east? Name two capes on the eastern coast of the United States. Three on the west coast. What mountains are near the west coast and parallel to it? (C——e and S——a N——a.) What mountains to the east of these?

What two bays on the eastern coast of the United States? Where is Boston? What city south-west of it? What one south of New York? What south-west of Philadelphia? Where is Washington? What city on the Ohio? On Lake Michigan? What city near the mouth of the Missouri? Near the mouth of the Mississippi? What one on the Pacific coast?

Mexico.—Bound Mexico. What river between Mexico and the United States? What gulf and peninsula on the Pacific coast? What is the principal mountain range called? Name one of its volcanoes. What is the capital? What city on the Bay of Campeachy?

Central America.—What sea on the east? What ocean on the west? What lake in the southern part? What are the chief cities? Where is British Honduras? To what country does it belong?

West Indies.—Name the largest islands of this group. Where is Havana? Port-au-Prince? San Domingo? Kingston? Where are the Bahama Islands? The Bermudas?

XX. CLIMATE, VEGETATION, AND INHABITANTS.

1. **Climate and Vegetation.**—The climate of North America is diversified. The greater part of the continent is in the Temperate Zone. This portion is generally well watered, and contains extensive forests, grassy plains, and abundant vegetation.

The extreme northern portion is cold and almost uninhabitable. It is marked by a discarded and scanty vegetation, which, on the Arctic shores, consists of nothing but lichens and mosses.

The southern part lies near or in the Torrid Zone. It has a tropical climate, an abundant rainfall, and luxuriant vegetation.

Cotton, coffee, sugar-cane, and tobacco are here extensively cultivated, and the banana, pine-apple, orange, and lemon are found in perfection.

2. **Advantages of Position.**—North America lies between the two great oceans; it has the Atlantic on the east and the Pacific on the west. Its harbors on the Pacific are midway between the western shores of Europe and the eastern shores of Asia.

With its double sea front, numerous harbors, narrow isthmus, and central position, combined with quick transit across it, North America is destined to be the most commercial of all the continents.

GREENLAND
ICELAND
HUDSON BAY
NEWFOUNDLAND
New York
Chicago
Philadelphia
Cincinnati
St. Louis
New Orleans
BAHAMA ISLANDS
GULF OF MEXICO
WEST INDIES
CARIBBEAN SEA
SOUTH AMERICA
NORTH AMERICA
POLITICAL MAP
SCALE OF MILES

3. **Discovery.**—America was discovered by Christopher Columbus in 1492. It was named America after Americus Vespucius, a Florentine and a contemporary of Columbus.

The first land discovered was what is now called Watling Island, which is one of the small islands of the West Indies. Other islands of the group were discovered, and finally the continent itself.

Columbus thought that these islands were the *East Indies*, and when it was found that they were not, they were called the *West Indies*.

Spanish colonies were promptly established in the New World. Cuba and the Spanish republics are memorials of these.

4. **Inhabitants.**—The continent is at present occupied by Caucasians of various nationalities, and by the descendants of African Negroes.

Both North and South America, with their adjacent islands, were inhabited, at the time of their discovery, by Indians, of whom only the Peruvians and the Aztecs of Mexico were civilized.

No horses, cows, or other domestic animals were known to the natives, except the horses and dog of Cuba and the llama of Peru.

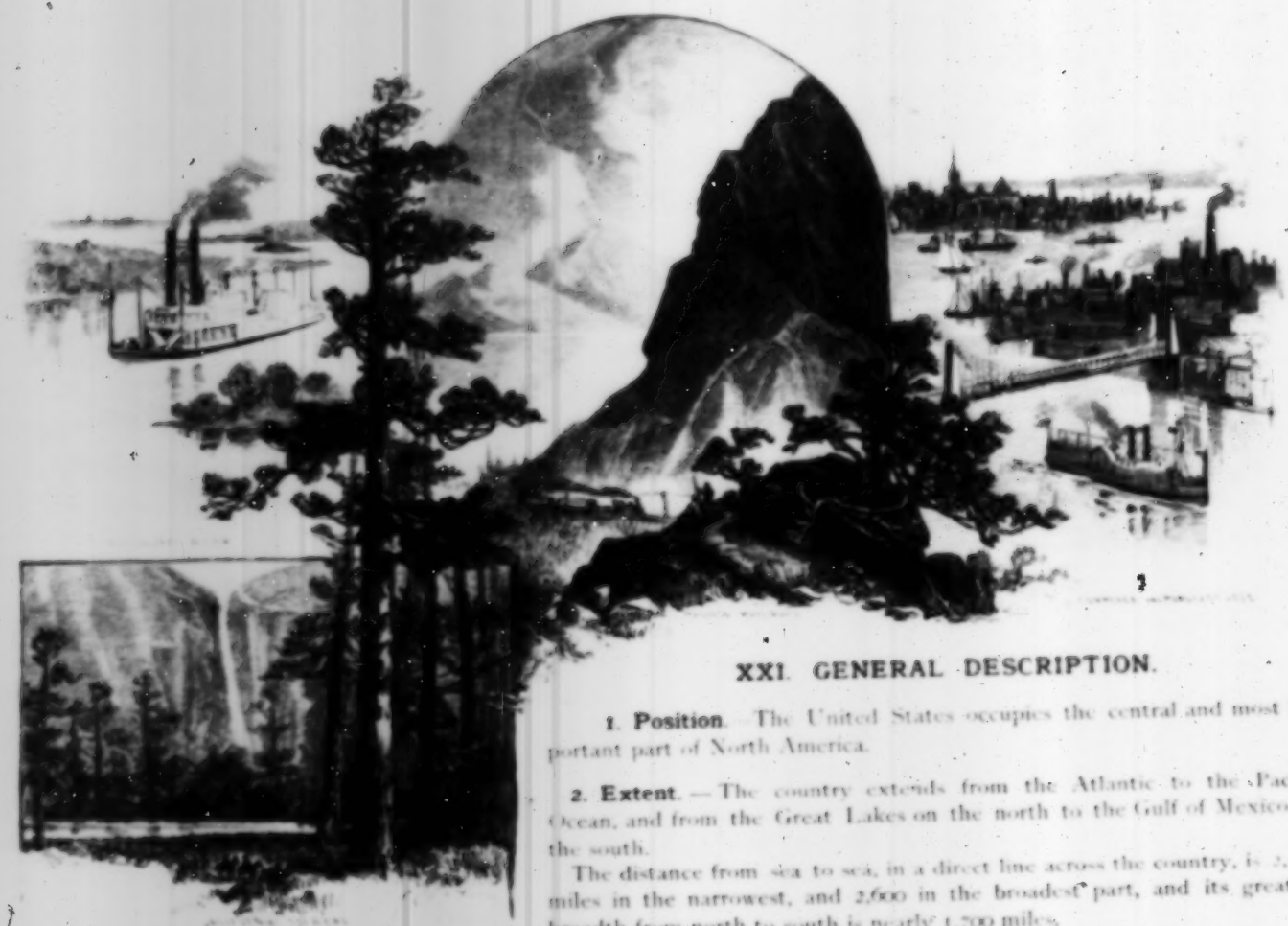
The Indians roamed over the country from one hunting ground to another, living in wigwams. They rarely cultivated the soil. Some of these tribes have adopted more settled habits of life, and are partially civilized. Most of them, however, are rapidly disappearing.

The Arctic portions of the continent are still in possession of the native Esquimaux, who live in snow huts, clothe themselves in the skins of animals, and feed upon fish and the flesh of the bear, seal, and walrus.

5. **Political Divisions.**—The Political Divisions of North America are *British America*, *Danish America* (including Greenland and Iceland), the *United States* (to which belongs the territory of Alaska), *Mexico*, *Central America*, and the *West Indies*.

Questions.—1. In what zone is a large part of North America? What is said of this portion? Of the extreme northern portion? Of the southern portion? Products? 2. How is North America situated? What is likely to make it the most commercial continent? 3. When and by whom was America discovered? Why was it called America? Account for the name West Indies. 4. What is said of the present inhabitants of the continent? Of the Indians? Esquimaux? 5. Name the political divisions of North America.

THE UNITED STATES.



XXI. GENERAL DESCRIPTION.

1. **Position.**—The United States occupies the central and most important part of North America.

2. **Extent.**—The country extends from the Atlantic to the Pacific Ocean, and from the Great Lakes on the north to the Gulf of Mexico on the south.

The distance from sea to sea, in a direct line across the country, is 2,100 miles in the narrowest, and 2,600 in the broadest part, and its greatest breadth from north to south is nearly 1,700 miles.

The area of the United States, including Alaska, is 3,611,849 square miles.

3. Surface.—The surface of the United States consists of three great natural divisions: I. The Atlantic Slope and Highland. II. The Valley of the Mississippi. III. The Pacific Highland and Slope.

THE ATLANTIC SLOPE AND HIGHLAND.

4. The Atlantic Slope lies between the sea and the Appalachian Mountains.

It consists of a belt of lowland and an upland region.

The low or coast land is narrow at the north, but widens toward the south, until it is from 200 to 300 miles in width.

West of this low plain lies the upland region, or hill country, which gradually increases in elevation until we reach the foot of the mountains.

5. The Atlantic Highland.—Beyond this hill country are the mountain ranges forming the Appalachian system. They lie nearly parallel to one another in a north-east and south-west direction, and extend from the St. Lawrence nearly to the Gulf of Mexico.

The most prominent of these ranges are the White Mountains, the Green Mountains, the Adirondacks, the Blue Ridge, and the Alleghany Mountains.

Here and there are elevations of 6,000 feet, but the average height is not more than 2,000 or 3,000 feet. With few exceptions they are forest-clad to their summits.

6. The Climate of this division varies with the latitude. In the northern portion we have long and severe winters; in the southern, flowers are blooming all the year round. The entire region has a moderate but sufficient rainfall.

7. The Products of the Atlantic Slope correspond with the climate. In its original state the country was covered with forests.

The northern section still remains to a considerable extent a lumber region.

In the central portion the yield of fruits and grains is abundant.

A little further south, tobacco is a leading production.

Reaching the Carolinas, we find cotton and rice, indicating a semi-tropical climate, while the orange groves of Florida bid fair to rival those of Sicily.

8. The Natural Advantages of the Atlantic Slope and Highland are very great.

The deposits of coal and iron are enormous.

The soil is productive.

Numerous rivers take their rise in the Highland and drain this region, while at the same time they furnish abundant water-power for the purposes of the manufacturer.

The coast line is much indented, and excellent harbors abound.

This region, therefore, possesses everything needed for carrying on the great industries of mining and agriculture, while in manufacturing and commerce it surpasses every other section of the country.

THE VALLEY OF THE MISSISSIPPI.

9. Valley of the Mississippi.—Crossing the wooded heights of the Appalachian ranges, we enter a vast shallow basin called the Valley of the Mississippi. It extends from the Appalachians to the Rocky Mountains, and from the Gulf of Mexico to the "Height of Land." It occupies nearly one-half the area of the United States.

If we look at the map we shall see that the Mississippi receives the waters of large rivers, such as the Ohio and the Tennessee on the east, and the Missouri, the Red, and the Arkansas on the west. This clearly shows that the lands on either side of the river form the sloping sides of a great valley.

A large portion of the upper Mississippi Valley consists of **prairies**. Some of them are rolling, others as level as the sea. Most of them are treeless.

Before they were cultivated they were covered in spring-time and summer with grass and flowers. Boundless fields of wheat and corn now occupy large portions of them.

West of the 100th meridian the **Great Plains** begin. They stretch out to the base of the Rocky Mountains. Their soil is covered with a short, nutritious grass, on which millions of buffaloes used to feed.

These Plains are the great *grazing region* of the United States.

10. Climate.—The northern section has a temperate climate, with hot summers and cold winters. The climate of the southern portion is semi-tropical.

The entire valley, with the exception of the Great Plains, is well watered.

The climate of the Great Plains is remarkable for its dryness. Agriculture depends upon artificial irrigation.

11. The Products of the Mississippi Valley are similar to those of the Atlantic Slope in corresponding latitudes. The leading productions are cotton and sugar, hay, grain, tobacco, and lumber.

The Mississippi Valley is the great *agricultural region* of the country.

12. The Natural Advantages of this region are unsurpassed.

Its mineral resources are inexhaustible.

Its soil is unrivalled in depth and fertility.

Its grazing lands are among the most extensive in the world.

It contains some of the most valuable timber lands in the country.

The Great Lakes, furthermore, are on the northern borders of this region. They are really inland seas. On their waters more than 5,000 vessels carry on an active internal commerce.

The Mississippi and its tributaries, moreover, drain the entire valley, and furnish water routes whereby the products of one portion of this region may readily be transported to another. The lumbermen of Minnesota float their rafts on the current of the Mississippi down to New Orleans, a distance of more than 2,000 miles; while the sugar, rice, etc., of the Gulf States may be transported upon the same waters to the States far away to the north.

THE PACIFIC HIGHLAND AND SLOPE.

13. The Pacific Highland embraces the Rocky Mountains and the Sierra Nevada and Cascade Ranges, with the great elevated Plateau lying between them.

The Rocky Mountains, with their snowy peaks, border the Plateau on the east. They form the loftiest water-shed in the United States. Here are found the head waters of the longest rivers that flow eastward into the Mississippi, and westward into the Pacific.

The Plateau has an average elevation of 5,000 feet above the sea level, and is from 300 to 700 miles in breadth.

It is traversed by numerous ridges and mountain chains, and is naturally divided into three regions, viz., the "Plain of the Columbia" on the north, the "Plateau of the Colorado" on the south, and between these the "Great Basin," in which is the Great Salt Lake.

The Sierra Nevada and Cascade Ranges form the western

MAP STUDIES.

PHYSICAL UNITED STATES.

Surface.—*Let the explanation of colors be recited, and let the profile section be explained.* Which half of the United States contains the greater amount of highland? What highland traverses the eastern half? What region between this highland and the ocean? What do the colors on the Atlantic Slope indicate? What great valley between the eastern and western highlands? Where is the "prairie region"? What plains form part of the western slope of the Mississippi Valley? What are the lowlands bordering the Gulf of Mexico called? How far north do these lowlands extend? Where are the Rocky Mountains? What three mountain ranges near the Pacific coast? Where is the Great Basin? What great lake in this region? Why is it salt? Ans. *It has no outlet. The water of all lakes and rivers contains some salt. When a lake has no outlet, its waters escape by evaporation only. The salt is left behind, and more and more is continually added by the inflowing rivers. Hence lakes with no outlet are salt.* Between what mountain ranges is the most extensive lowland on the Pacific Slope? Of what State does this lowland form an important part? What striking contrast between the Atlantic and Pacific shores is shown by the colors of the map?

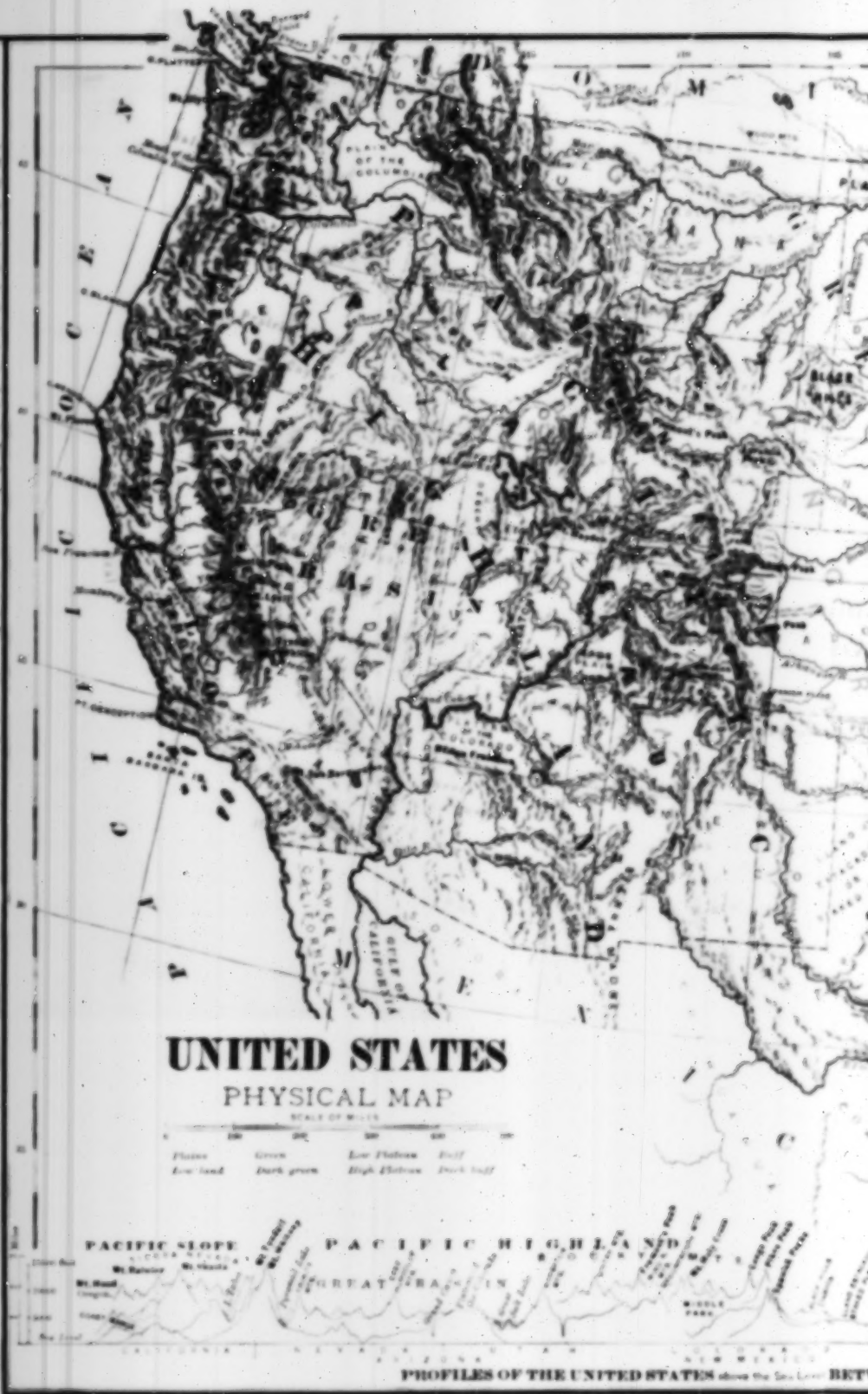
Rivers and Lakes.—Name the most important river of the United States. What is the chief tributary of the Mississippi? How far can steamers ascend the Mississippi? Ans. *To St. Paul, 2,200 miles from its mouth.* How far is the Missouri navigable? Ans. *Nearly to the "Great Falls," about 4,000 miles from the mouth of the Mississippi. This is a greater distance than from New York to Liverpool.* What is the chief eastern tributary of the Mississippi? To what States does it afford water communication? How far are the rivers of the Atlantic Slope navigable? Ans. *Generally through the dark green or lowland belt.* Where is the Yellowstone River? The Platte? Arkansas? Red? Rio Grande? What river enters the Gulf of California? For what is it famed? Ans. *The canons through which it flows. They are gorges through the rock, some of which are 6,000 feet deep.* Name the two most important rivers of California. What river breaks through the Cascade Range and enters the Pacific Ocean?

Name the Great Lakes. Which is the largest? What State does it nearly equal in area? Ans. *Maine.* Which is the smallest of the lakes? With what State may we compare Ontario? Ans. *It is much larger than Connecticut.* Which of the Great Lakes is wholly within the United States? To what country do the others partly belong?

Climate.—Between what parallels of latitude does the United States lie? What should be the prevailing winds? Ans. *The United States is in the region of the Counter-Trades, which are westerly winds.* In what part of the country are the west winds bearers of rain? Why? From what directions do the winds come that bring rain on the Atlantic coast? Explain this. What winds water the Gulf Slope? Ans. *The winds that blow from Gulf of Mexico.*

In what zone does the United States lie? What, then, should be the climate? The Tropic of Cancer is in lat. 23½ N. How far distant from the tropical regions is the southern point of Florida? Land winds in winter being cold, and sea winds warm, which must have the milder winter weather, the north-east corner of the United States or the north-western?

Minerals.—What part of the country is the great mineral region? What are the principal minerals found here? What are the leading mineral products of the Atlantic Highland? Name those found on the shores of Lake Superior. In which half of the United States is coal most abundant? In what parts of the country is salt obtained? In what parts of the Mississippi Valley do you find iron? Coal? Lead? Petroleum? What valuable minerals among the Ozark Mountains?



BETWEEN THE PACIFIC OCEAN AND THE ATLANTIC OCEAN. Note. The Scale of Height is 40 times the Scale of length.

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Vegetation.—Name the grains raised in the Mississippi Valley. In what part of the valley is the great "wheat region"? The "corn region"? The "hemp and tobacco region"? What portion of the country does the "cotton region" include? The "sugar and rice region"? Where is the "tobacco region" of the Atlantic Slope? In what portion of the lowland is the orange raised? What are the agricultural products of the valleys of the Pacific Slope? What is the most important? Ans. *The California wheat.*

Which half of the United States most abounds in forests? Where are the great "forest regions" found? Where is the "forest region" of the Pacific Slope? From what part of the Atlantic Slope do we get pitch, rosin, tar, and turpentine? Where does the "live-oak" grow?

In which half of the country is the great "grazing region"? Where is it?

boundary of the Plateau. They are really one chain, following the coast at a distance of about 150 miles.

Many of the peaks of the Rocky Mountains and the Sierra Nevada rise to the height of 14,000 feet.

14. Climate.—The climate of the Pacific Highland is marked by extreme dryness. It has but little rain, except on the mountains.

Owing to the absence of moisture, the air is rapidly heated and rapidly cooled. When the temperature at noon will be 70° or 80°, and at sunrise below freezing point.

15. Resources.—The mineral treasures of gold and silver are almost fabulous. This is the great *metalliferous region* of the country.

The natural products of the Plateau are the sage brush, which covers the northern half, and the cactus, which occupies the southern half.

16. The Pacific Slope.—Leaving the Plateau, and crossing the Sierra Nevada and Cascade Ranges, we find ourselves upon the Pacific Slope, which extends from the summits of these mountains to the sea.

It includes the fine valleys of California, Oregon, and Washington Territory, and the Coast Range Mountains that border the Pacific.

17. The Climate of the Pacific Slope, owing to the prevailing winds from the sea, is much milder than that of corresponding latitudes on the Atlantic Slope. The summers are cooler, and the winters so mild that cattle require no housing.

The rains occur during the winter, which is known as the *rainy season*; the summer is called the *dry season*.

18. The Products and Resources of the Pacific Slope are extraordinary.

The mines of silver, quicksilver, and gold are of enormous value.

Vegetables and fruit attain a size that is almost incredible; and the yield of wheat is sometimes 50 bushels to the acre.

Magnificent forests cover the mountain slopes. Trees are found measuring 40 feet in diameter.

Facing the Asiatic continent, moreover, the Pacific Slope enjoys unrivalled advantages for carrying on commerce with the populous nations of China and Japan.

Questions. 1. What is the most important country in North America? What part of the continent does the United States occupy? 2. How far east and west does it extend? North and south? What is the greatest distance across the United States between the Atlantic and Pacific Oceans? What the least? What is the greatest breadth? Area? 3. How is the surface of the United States divided? Name the natural divisions? 4. Describe the Atlantic Slope? 5. Where is the Atlantic Highland? What mountains does it contain? Height of these mountains? 6. What is said of the climate of this section? Rainfall? 7. What are the products of the northern portion of the Atlantic Slope? Central? Southern? 8. What are the natural advantages of this section? 9. Describe the Mississippi Valley? Its extent? What rivers indicate the slope of the valley? What is said of the prairies? The plains? 10. Climate of the northern portion? The southern? The Plains? 11. What is said of the products? 12. State some of the natural advantages of this region? What can you say of the lumbermen of Minnesota and the products of the Gulf States? 13. Describe the Pacific Highland? What is said of the Rocky Mountains? Of the Plateau region? Width? How is it divided by mountain chains? Name and locate each division? What is said of the Sierra Nevada? Height of peaks? 14. What is the climate of the high region? What effect has the absence of moisture upon the air? 15. What is said of the mineral wealth? What are the natural products of this section? 16. Describe the Pacific Slope? What does it include? 17. Why is the climate of this section milder than that of the Atlantic Slope? What is said of the summers and winters? Which is the rainy season? The dry? 18. What can you say of the mines of this section? Fruits and vegetables? Wheat? Its forests? Its commercial advantages?

XXII. STATES—POPULATION.

1. The United States consists of thirty-eight States and ten Territories, which are variously divided into groups or sections.

2. Grouping of States.—The following is a convenient grouping:

New England States.

Maine,	Vermont,	Rhode Island,
New Hampshire,	Massachusetts,	Connecticut.

Middle Atlantic States.

New York,	Pennsylvania,	Virginia,
New Jersey,	Delaware,	West Virginia,
	Maryland,	*District of Columbia.*

Southern States.

North Carolina,	Florida,	Texas,
South Carolina,	Alabama,	Arkansas,
Georgia,	Mississippi,	Tennessee,
	Louisiana,	*Indian Territory.*

Central States.

Kentucky,	Missouri,	Michigan,
Ohio,	Kansas,	Wisconsin,
Indiana,	Iowa,	Minnesota,
Illinois,	Nebraska,	*Dakota Territory.*

Rocky Mountain and Pacific States.

Colorado,	California,	Oregon,
Nevada,	*New Mexico Territory,*	*Wyoming Territory,*
Montana Territory,	*Idaho Territory,*	*Utah Territory,*
Arizona Territory,	*Washington Territory,*	*Alaska Territory.*

By a more natural classification, we might group the States as the Atlantic, the Gulf, the Inland, the Lake, and the Pacific States.

We also speak of the "Valley States," meaning those that are in the Mississippi Valley; and the "Cotton States," meaning those in which cotton is the principal staple, as Texas, Louisiana, Mississippi, Alabama, Florida, Georgia, and South Carolina.

3. Early Colonies.—The first English colony was established at Jamestown, Virginia, in 1607. In 1620 the Pilgrims founded Plymouth Colony in Massachusetts. Soon afterward Maryland was settled by Roman Catholics, and Pennsylvania by Quakers.

The Dutch had settlements in New York, the Swedes in New Jersey, and the Danes in Delaware; but about 1664 these colonies became subject to the English, who proceeded to establish and acquire others, until their colonies numbered thirteen.

These were Virginia, Maryland, Georgia, North Carolina, South Carolina, Delaware, Pennsylvania, New Jersey, New York, Massachusetts, Rhode Island, New Hampshire, and Connecticut. They are often called the "*Original Thirteen.*"

In 1776 they declared themselves free, sovereign, and independent, and after seven years' war, their independence was acknowledged by Great Britain. They united under a constitution, and so created the government of *The United States of America.*

4. Acquisition of Territory.—Additional territory has been acquired by the United States, mainly by purchase.

In 1803 Louisiana, then including the greater part of all the territory of the United States west of the Mississippi, was purchased from the French.

In 1819 Florida, which had been settled by Spaniards in 1565, was purchased from Spain.

In 1845 Texas, having previously revolted from Mexico and established her independence, was annexed to the United States.

In 1848 California, with the territory lying between it and the Rocky Mountains, was ceded to the United States by Mexico. In 1853 the southern portions of Arizona and New Mexico were purchased from Mexico.

Finally, in 1867, Alaska was purchased from Russia. Thus the country has been enlarged to its present gigantic proportions.

5. Inhabitants.—The inhabitants of the United States consist mainly of the descendants of English colonists. But nearly every country of Europe has contributed to swell the population. Every year large numbers of fresh settlers arrive. Of these the Germans and Irish are the most numerous.

A census is taken by the general government of the United States once every ten years. By the census of 1870, the population was nearly 39,000,000. The estimated population for 1880 is about 49,000,000.

6. The principal cities of the United States in the order of their population are:

More than 500,000 inhabitants	New York, Philadelphia.
Between 200,000 and 500,000	Brooklyn, St. Louis, Chicago, Baltimore, Boston, Cincinnati, San Francisco.
Between 100,000 and 200,000	New Orleans, Buffalo, Washington, Newark, Louisville.

Questions.—1. Of how many States and Territories does the United States consist? 2. Give the groups into which they are arranged. What natural classification ought be adopted? What are the "Valley States"—the "Cotton States"? 3. Where and when was the first English colony established? The Plymouth colony? Where did the Roman Catholics settle? The Quakers? The Dutch? The Swedes? The Danes? What nation acquired possession of the Dutch, Swedish, and Danish colonies? What do you mean by the "Original Thirteen"? What occurred in 1776? 4. How was Louisiana acquired? Florida? Texas? California and Arizona? Alaska? 5. What is said of the inhabitants? How often is the census taken? What was the population in 1870? What is it expected to be in 1880? 6. Name the cities having more than 500,000 inhabitants—those having between 200,000 and 500,000—between 100,000 and 200,000.

XXIII. GOVERNMENT.

1. Government.—The Departments of the United States Government are three: the *Legislative*, or Congress, the *Executive*, and the *Judicial*, or Supreme Court.

2. The Legislative Department, or *Congress*, consists of the Senate and House of Representatives.

The SENATE is composed of two senators from each State, chosen by the people to serve six years.

The Vice-President is the presiding officer of the Senate.

The HOUSE OF REPRESENTATIVES consists of members chosen by the people to serve two years. Each State sends one representative for every 135,000 inhabitants.

A Speaker is chosen by the Representatives themselves to preside in their meetings.

The LAWS are made by Congress, with the approval of the President.

If the President does not approve any bill passed by Congress, he may veto (forbid) it, but it may still become a law by a two-thirds vote of each House.

Congress holds its sessions in the Capitol at Washington.

THE NATIONAL CAPITOL.

3. Executive Department.—The *President* is the chief executive officer. His duty is to see that the laws are *executed* or carried out.

The President and Vice-President are chosen for four years, by electors, of whom the number in each State is equal to the number of its members of Congress.

4. The Judicial Department, or **Supreme Court,** consists of a Chief-Justice and eight Associate Judges, appointed by the President, with the consent of the Senate.

5. State Government.—Each State has a government similar to that of the United States.

It has a Legislature consisting of two Houses, a Governor elected by the people, and a Supreme Court. Neither Congress nor the Legislature of a State has the right to make any law contrary to the Constitution of the United States.

Questions. 1. What are the three Departments of the United States Government? 2. Of what does the Legislative consist? How many senators from each State? Chosen for how long? Who presides in the Senate? Of what does the House of Representatives consist? How many Representatives can a State have? Who presides in the House of Representatives? What body makes the laws? What is meant by the President's veto? 3. Who is the chief executive officer of the United States? How long do the President and Vice-President serve? How are they chosen? How many electors are there from each State? 4. What judges form the Supreme Court? Who appoints them? 5. How is each State governed?

XXIV. INDUSTRIES.

1. Agriculture is the most important occupation of the people of the United States. The leading products north of the parallel of 36° north are corn, wheat, oats, rye, barley, hay, potatoes, flax, hemp, and tobacco.

South of this parallel is the region of cotton, sugar, and rice.

The Central States produce more than three-fourths of the entire corn and wheat crop of the country.

2. Grazing is an important industry. In Texas and the States of the Great Plains, cattle and sheep are raised in vast numbers.

MAP STUDIES.

POLITICAL UNITED STATES

NOTE TO TEACHER.—It is earnestly recommended to the teacher to drill the class in drawing the maps of the United States before these map studies are assigned as lessons. For directions, see page 132.

What parallel of latitude forms a large part of the northern boundary line? What strait forms the western termination of the boundary? Starting eastward from the Lake of the Woods, trace the boundary to the Atlantic. What gulf and river form parts of southern boundary? What country forms the rest? What ocean on the east? On the west?

Name the States bordering on the Atlantic. On the Gulf. What States and Territory on the Pacific? Which border the Great Lakes? Which are crossed or bounded by the Rocky Mountains? Name the States partly bounded by the Mississippi? Which are partly bounded by the Missouri? What State and Territory are crossed by the Missouri? Which States are partly bordered by the Ohio? What State and Territory are partly bounded by the Columbia? Which is the largest State? Which the smallest?

Let the States and Territories of each group be named, with capitals.

Which States are most favorably situated for commerce with Europe? Which of the Atlantic ports are the nearest to Europe? What natural means of transportation do the States of the Mississippi Valley possess? Through how many degrees of latitude does the Mississippi flow? What advantage has the United States from the possession of the mouth of this river? Ans. *It furnishes an outlet to the sea for the produce of the Mississippi Valley.*

In addition to the rivers and lakes, what other means of transportation has the United States? Ans. *Numerous railways, the most important of*

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which are shown by the red lines on the map. In what part of the country are railways most numerous? By what water routes may a farmer in Illinois send grain to the Atlantic seaboard? By what water route may the coal of Pennsylvania and West Virginia be sent to Cincinnati?

Where is Cape Cod? Montauk Point? Sandy Hook? Cape May? Henlopen? Charles? Henry? Hatteras? Name the other two capes on the coast of North Carolina. What capes on the coast of Florida? Where is Point Conception? Cape Mendocino? Blanco? Flattery?

Where is Washington? New York? Boston? Brooklyn? Baltimore? What great city on the Delaware? Where is Chicago? What large city near the mouth of the Missouri? Where is Cincinnati? Louisville? What city near the mouth of the Mississippi? Besides New Orleans, what are the two great Gulf ports? What is the great port on the Pacific coast? Where is Savannah? Norfolk? Portland? Buffalo? Detroit? Milwaukee?

Other grazing products are the pork and wool of the Central States, the wool of the Pacific States, and the butter and cheese of the Middle Atlantic States.

3. **Mining** is a leading and growing industry. The precious metals are found mainly in the Rocky Mountain and Pacific States; coal and iron in the Middle Atlantic and Central States.

4. **Manufacturing** is carried on chiefly in the States lying north of the Ohio and Potomac. The leading manufactures are cotton and woollen goods, machinery and tools, lumber, leather, flour, and salt.

The manufacture of cotton goods is steadily advancing in some of the cotton-growing States.

5. The **Fishing** interests of the country are important. They engage the attention mainly of the seaboard States of New England and the Pacific State of Oregon.

6. **Domestic Commerce.**—The products and industries of the different sections of the country differ widely. This gives rise to a large and growing domestic commerce. The facilities for carrying on this commerce are very great.

The *Mississippi*, with its 33 navigable tributaries, affords means of intercommunication by water between the different States of the Mississippi Valley, and connects them with the Gulf at New Orleans.

The *Erie Canal*, which traverses the State of New York, connects the Great Lakes and the Hudson River, and forms a second water route.

The *Great Lakes*, with the Welland and other Canadian canals and the St. Lawrence, form a third great water route.

By means of these and a vast system of railroads the different parts of the country readily exchange their products.

7. The **Foreign Commerce** of the United States is very large. The water routes and railways above mentioned serve to convey the products of the country to the seaboard, whence they are carried to foreign ports by numerous lines of ocean steamers.

The leading *Exports* are cotton, breadstuffs, petroleum, provisions, the precious metals, and tobacco. The demand for our manufactured products is steadily increasing. By far the greater part of our exports goes to Great Britain.

A very important trade is carried on with the West Indies and South America in flour, lumber, and manufactures. Germany is the great purchaser of petroleum.

Imports.—Tin, iron, and dry goods come to us from England; wines, dry goods, and silks from France; teas, raw silk, and porcelain are brought from China and Japan; Java and Brazil send us coffee; the West Indies sugar and fruits.

During the last ten years the exports of the United States to Great Britain have very largely increased, while the importation of British products has greatly fallen off.

Questions.—1. What is the most important industry of the United States? What are the leading products north of the 36th parallel? South? How much of the corn and wheat crop of the country do the Central States produce? **2.** What is said of grazing? **3.** Mining? **4.** Manufacturing? **5.** Fishing? **6.** Domestic commerce? What are the great commercial water routes? What does the Mississippi connect? The Erie Canal? The Canadian canals? What other means of transportation beside the water routes of the country? **7.** What is said of the foreign commerce of the United States? How is our produce transported? What are our leading exports? Imports? Is the export trade increasing?

NEW ENGLAND STATES.

XXV. GENERAL DESCRIPTION.

State.	Area in Sq. Miles.	Population, 1880.	Capitals.	Chief Cities and their Population.	
Maine	32,000	627,000	Augusta	Portland	31,413
New Hampshire	9,300	318,000	Concord	Manchester	23,536
Vermont	10,200	332,000	Montpelier	Burlington	14,387
Massachusetts	7,800	1,457,000	Boston	Boston	290,526
Rhode Island	1,300	217,000	} Providence } Newport	Providence	68,904
Connecticut	4,700	537,000	Hartford	New Haven	50,840

1. **Position and Area.**—The New England States are situated in the north-eastern part of the United States, between the parallels of 41° and 47° 20′ north latitude. They are small States. The six taken together are not as large as Nebraska, nor one-fourth the size of Texas.

They are bounded, north by Canada, east by Canada and the Atlantic Ocean, south by the Atlantic, and west by New York and Canada.

MAP STUDIES.

General Questions.—Between what parallels do the New England States lie? How are they bounded? Which is the largest? The smallest? Which has the greatest length of sea-coast? Which is wholly inland? Bound each State.

Which two States are most mountainous? What range of mountains traverses the western portion? *The Green Mountains are a branch of the Appalachians. The White Mountains are a spur of the Green Mountains. You observe that most of the rivers flow in a southerly direction, while others flow northwardly.* What two general slopes, then, has the surface of New England? What is the longest river in New England? What States are separated by it? What State has the most lakes?

Maine.—Mention the principal mountains in this State. What is the general slope of Maine? Name the important rivers. In what direction do they flow? What lakes have outlets to the Sea through the St. Croix? The Penobscot? Kennebec? Androscoggin? The St. John's?

What large island on the coast? What bays? Capes? What city on Casco Bay? Where is Bangor? Bath? Lewiston? Biddeford? What and where is the capital?

New Hampshire.—What mountains in the northern part of this State? What mountain in the southern part of the State? Name the largest lake in this State. What river drains this lake? Describe the course of the Connecticut River. Where is Concord? Nashua? Manchester? Portsmouth? Dover? What is the capital?

Vermont.—What parallel constitutes the northern boundary of this State? What mountains traverse this State from north to south? What are the principal rivers on the western slope of this State? Into what do they flow?

Through what rivers do the waters of Lake Champlain reach the sea? What lake in the northern part of the State mainly in Canada? What rivers in Vermont are tributary to the Connecticut? Where is Burlington? Montpelier? Rutland? St. Albans? Brattleboro? What is the capital?

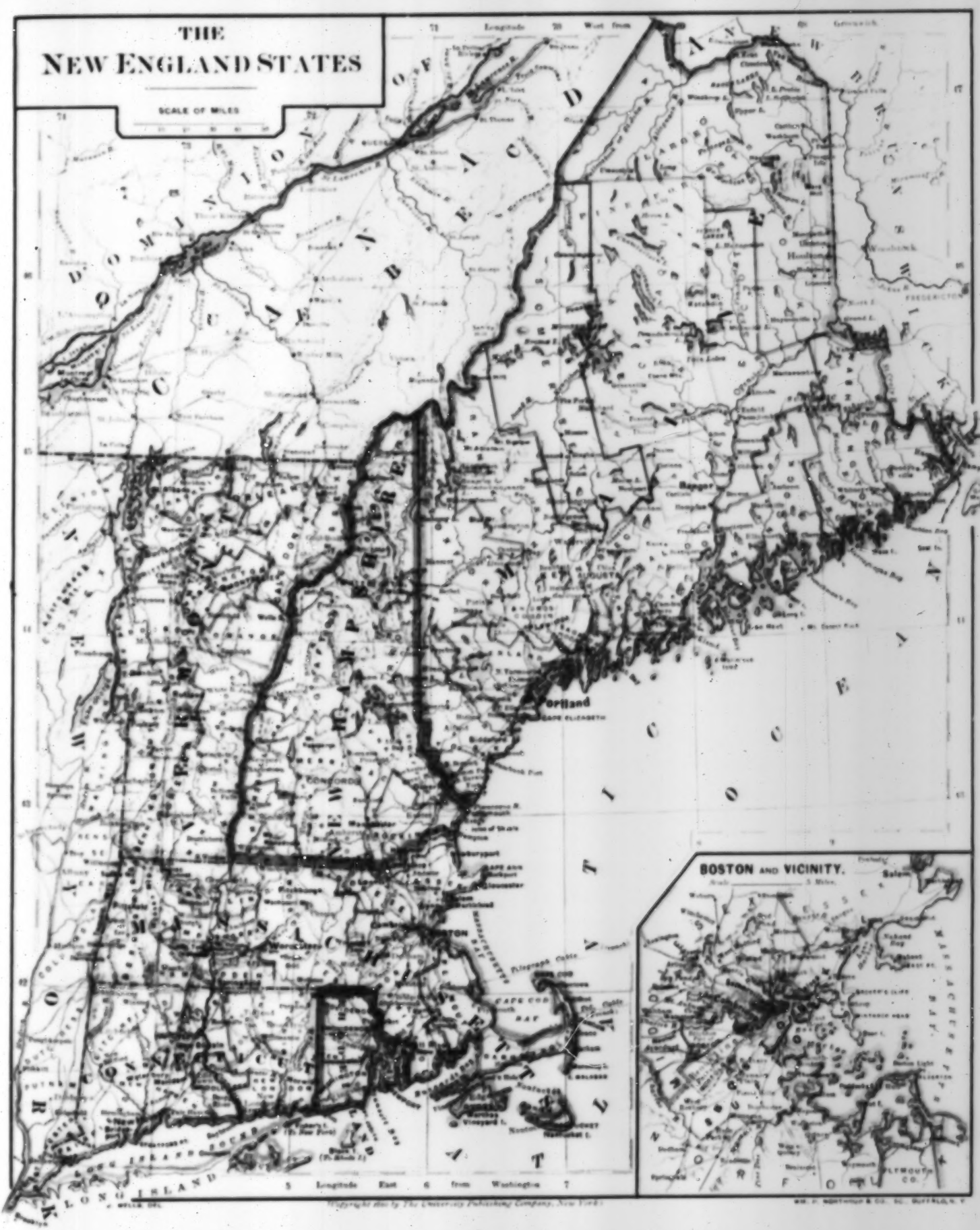
Massachusetts.—What part of the State is mountainous? Name the mountains. Which are the principal peaks, and where situated? What part of the State is drained by the Connecticut and its tributaries? By the Merrimac?

Name the capes. What two bays on the eastern coast? What one on the southern coast? What and where is the capital? Where is Lowell? Lawrence? Salem? Lynn? Springfield? Worcester? Pittsfield? The Hoosac Tunnel? Fall River? Taunton? Cambridge? Northampton?

Rhode Island.—What bay in the south-eastern part of the State? What city at its head? What large island in this bay? *Ans. Rhode Island.* What cape on the coast? Name the two capitals. Where is Newport?

Connecticut.—In what direction does the surface of this State slope? What body of water forms its southern boundary? What rivers cross the State? Into what do they flow? What and where is the capital? Where is Middletown? New Haven? New London? Waterbury? Meriden? New Britain? Danbury?

MAP DRAWING.—*For directions for map-drawing, see page 127.*


THE
NEW ENGLAND STATES
SCALE OF MILES
Longitude West from Greenwich
Longitude East from Washington
Portland
CAPE ELIZABETH
CONCORD
BOSTON AND VICINITY.
Salem
LONG ISLAND
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2. Coast.—The coast-line of these States, especially that of Maine, has a very jagged appearance, and a number of rocky islets curtain the shores—sure signs that there is no lack of deep water and good harbors.

Vermont is the only one of these States that has no sea-coast.

3. Surface.—The surface of New England is generally rugged and hilly.

The *western* portion is traversed from north to south by the Green Mountains, which extend from Canada nearly to Long Island Sound.

The *eastern* section is broken by a succession of hills and mountains extending through the entire length of these States, and culminating in the White Mountains.

Between these two lines of elevation lies the valley of the Connecticut. Along the southern portion of the coast is a belt of lowland of varying width.

The White Mountains, chief range of North America, are the highest east of the Rocky Mountains. Mount Washington, in New Hampshire, rises 6,293 feet high. Mount Mitchell, a peak of the Blue Ridge, in North Carolina, is only about one-third higher.

4. Lakes and Rivers.—A marked feature of the New England States, which is most prominent in Maine, is the number of beautiful fresh-water lakes that dot their surface, as well as the number of streams which thread their way from the hills and mountains to the sea.

Some of these rivers flow west into Lake Champlain, but most of them run east and south, and enter the Atlantic Ocean.

The most important rivers are the Connecticut, the longest river of New England, navigable to Hartford; the Merrimac, which, with its tributaries, furnishes water-power for more factories than any other river in the world; the Penobscot, which is navigable to Bangor; and the Kennebec.

If we consider how close to the sea are the mountains and highlands of this section, we shall understand that the streams which flow thence to the sea must have a great descent, with rapid currents and falls, affording abundance of water-power. These rapid streams have contributed to make New England the leading manufacturing district of the country.

5. Climate.—The winters of New England, by reason of the latitude, are long and cold; the summers are short and hot.

The nearness of these States to the sea has little effect in tempering their climate, because the prevailing winds are from the land. When the wind comes from the sea it often makes damp and foggy weather.

6. Resources.—The most important minerals are granite from Maine, New Hampshire, and Massachusetts; slate and marble from Vermont; and red sandstone from Connecticut. Lead, silver, and copper are found in various locations.

The soil generally is not well adapted to agriculture, except in the river valleys.

The numerous rapid rivers, forests, and good harbors shape the leading occupations of this section.

7. Industries.—The inhabitants of New England are chiefly engaged in manufacturing, commerce, lumbering, ship-building, ice-cutting, and fishing.

MANUFACTURES.—This region is scarcely excelled in the world for the variety and amount of its manufactures.

The leading articles of manufacture are cotton and woollen goods, machinery, hardware, rubber goods, boots and shoes. Small wares also, such as buttons and combs, are produced in great variety.

More than one-third of all the woollen, cotton, and leather goods manufactured in the United States is produced in Massachusetts, Rhode Island, and Connecticut.

COMMERCE.—New England has an extensive *foreign commerce*, and a large trade with other portions of our own country.

It has direct railway connections with every port of the United States and with the Dominion of Canada, while hundreds of vessels are engaged in its coasting trade.

The principal *exports* are manufactured articles, lumber, marble, granite, ice, wool, and dairy products.

FISHERIES.—New Bedford, Marblehead, Newburyport, and Gloucester are the chief towns engaged in the fisheries; they are all in Massachusetts. Their fishing-grounds for cod and mackerel are, however, on the Banks of Newfoundland.

8. The common, high, and normal schools of this section rank with the best in the country; and its colleges and universities are among the best endowed and most renowned.

Questions.—Give area, capital, and chief city of each New England State. **1.** Where are they situated? How large are they? **2.** What is said of their coast-line? Which has the longest and most indented coast-line? What advantage arises from this indentation? **3.** What of the surface of New England? What mountains traverse the western section? Describe the eastern section. Where does the Connecticut Valley lie? What is said of the southern portion of land along the coast? What is the highest mountain in New England? Is it the highest mountain in the Atlantic States? **4.** What marked feature in the surface do you observe on the map of New England? Into what do most of the rivers flow? Name the most important rivers. What is said of the Merrimac? Why is there ample water-power in New England? Effect of this upon industries? **5.** The climate? Prevailing winds? **6.** Mineral resources? What of the soil? What shape the leading industries? **7.** Name the chief occupations. How does New England rank as a manufacturing region? Name the leading articles produced. What is said of the commerce? Exports? Fisheries? **8.** Schools and colleges?

XXVI. NEW ENGLAND STATES (Continued).

1. MAINE. Maine, the largest of the New England States, is the most easterly State in the Union.

It excels in ship-building, in fisheries, the lumber trade, and the harvesting and export of ice.

The timber, which is cut in the great forests of the northern part of the State during the winter, is drawn over the frozen snow to the banks of the streams, upon which it is launched and floated down in the spring. Most of it descends the Penobscot River to Bangor, where it is sawed into lumber.

The fine ships built in Maine have spread the fame of her shipwrights to all parts of the world.

2. Portland, the principal seaport and largest city, has a fine harbor and extensive commerce. It is in railway connection with Canada. A vast amount of the trade between Canada and England is carried on through this port. It has also a large commerce with the West Indies.

Bangor is the great lumber market of the State.

Augusta, the capital, is situated on the Kennebec, at the head of navigation.

Biddeford, Saco, and Lewiston are important manufacturing towns. Bath is famous for its lumber trade and ship-building. Rockland supplies most of the lime used in the United States.

3. NEW HAMPSHIRE. This State is often called the "Granite State," because of the abundance of its granite rock, and the "Switzerland of America," because of the beauty and grandeur of its lake and mountain scenery. It has only a few miles of sea-coast, and hence its people are little given to seafaring.

They are largely engaged in working quarries of stone. Grazing is an important occupation; but the most valuable industry is the manufacture of cotton and woollen goods.

4. Concord, the capital and second city in the State, is celebrated for its manufacture of wagons and coaches.

Manchester, the largest city, and Nashua are noted for their cotton and woollen factories. Dover, Keene, and Great Falls are thriving manufacturing towns.

Portsmouth, on the Piscataqua (*pis-kat'-a-kwa*) River, is the only seaport in New Hampshire. It has an excellent harbor, upon which, just across the border, at Kittery, in Maine, is one of our finest navy yards.

Hanover is the seat of Dartmouth College.

5. VERMONT.—Vermont (*vert, green*; *mont, mountain*), so called from the Green Mountains which traverse it, is an inland State.

It is a fine wool-growing, stock-raising, and dairying country, and is specially famed for its horses.

In the production of maple sugar it excels all other States.

Its quarries of marble and slate are extensive and valuable.

6. Burlington, the largest city, is on Lake Champlain. It is extensively engaged in the lumber trade.

Rutland and St. Albans are important centres of trade.

Montpelier is the capital.

7. MASSACHUSETTS. Massachusetts, the "Bay State," is the wealthiest and most populous of the New England States.

In manufacturing and fisheries it is the leading State in the Union. In wealth and commerce it is one of the most prominent.

8. Boston, the capital of Massachusetts, is the commercial emporium of New England.

It is distinguished for its places of historic interest, its public libraries and schools, and its general intellectual activity. It is often called the "Athens of America."

Cambridge is the seat of Harvard University, one of the oldest and most renowned institutions of learning in the country.

Worcester, the second city in the State, is a great railroad and manufacturing centre.

The largest and most celebrated manufacturing establishments in Massachusetts are at Lowell, Fall River, and Lawrence, famous for their cotton and woollen goods.

At Springfield is an armory of the United States where muskets for the public service are made. Lynn is celebrated for boot and shoe making. New Bedford is (or formerly was) the greatest whaling port in the world. It is a busy manufacturing city. Taunton is noted for the manufacture of locomotives.

9. RHODE ISLAND.—Rhode Island is the smallest, but one of the most densely populated of the United States. It is largely engaged in manufacturing cotton and woollen goods, machinery, firearms and jewelry.

10. Newport, one of the two capitals, is situated on one of the finest harbors in New England, and is a noted watering-place.

Providence, the second city in New England, and also one of the State capitals, has a large commerce, and manufactures extensively cotton goods and silverware. It is the seat of Brown University.

11. CONNECTICUT.—Connecticut manufactures one-half of the rubber goods, more than half the hardware and pins, and nearly all the clocks used in the United States.

It is largely engaged in the coasting trade.

The valley of the Connecticut is the most fertile portion of the State, and is noted for its fine tobacco crops.

12. Hartford, the capital, is at the head of navigation on the Connecticut, and is an important manufacturing centre. New Haven, the "City of Elms," on Long Island Sound, is the seat of Yale College, one of our oldest and most famous literary institutions.

Bridgeport is extensively engaged in manufacturing sewing-machines.

New London is largely interested in steamboating.

Norwich, Meriden, New Britain, and Danbury are large and prosperous manufacturing towns.

Portland is noted for its quarries of red sandstone.

Questions.—1. Which is the largest New England State? In what does it excel? At what season of the year is the timber cut? What is said of Bangor? 2. What is the principal city of Maine? What is said of Portland? What business is done through it? Name the important manufacturing towns in the State. What and where is Augusta? What is said of Bath? 3. What is New Hampshire often called, and why? What is said of its coast-line? What are the principal branches of industry in New Hampshire? 4. What is said of Concord? Which is the largest city in the State? For what are Manchester and Nashua noted? Name some of the manufacturing towns in this State. How many support towns has New Hampshire? What great public establishment is situated on Portsmouth harbor? Where is Dartmouth College? 5. From what does Vermont derive its name? What industries are most important? For what is the State famed? In what does it excel all other States? 6. Name its chief cities. 7. What is the rank of Massachusetts as a New England State? What is its rank in manufacturing? Fisheries? Commerce? 8. What is the commercial emporium of New England? For what is it distinguished? What is it often called? What can you say of Cambridge? Worcester? Where are the most extensive manufacturing establishments in New England? Name the principal wares that are manufactured at each? What can be said of Springfield? Lynn? New Bedford? Taunton? 9. Which is the smallest State in the Union? In what is it extensively engaged? 10. Where is Newport, and for what is it noted? Which is the second city in New England? What can you say of it? How many capitals has Rhode Island, and what are they? 11. What proportion of all our rubber goods, hardware, pins, and clocks does Connecticut manufacture? What other industry is largely engaged in? For what is the valley of the Connecticut noted? 12. Where is Hartford, and what can you say of it? Of New Haven? Bridgeport? What industry is New London engaged in? Name other important manufacturing towns in Connecticut. For what is Portland noted?

MIDDLE ATLANTIC STATES.

XXVII. GENERAL DESCRIPTION.

New York	47,000	4,383,000	Albany	New York	942,292
New Jersey	8,320	906,000	Trenton	Brooklyn	396,099
Pennsylvania	46,000	3,522,000	Harrisburg	Newark	105,059
Delaware	2,120	125,000	Dover	Philadelphia	674,022
Maryland	11,124	781,000	Annapolis	Wilmington	30,841
District of Columbia	64			Baltimore	267,354
Virginia	42,000	1,729,000	Richmond	Washington	109,199
West Virginia	23,000	442,000	Wheeling	Richmond	51,038
				Wheeling	19,280

1. **Position and Area.**—The Middle Atlantic States embrace nine degrees of latitude. They extend several degrees farther to the south than the New England States; and have a milder climate and more varied agricultural productions. The two sections differ also in many of their leading pursuits.

New York is the largest, and Delaware the smallest of these States.

New York alone is nearly three fourths the size of all the New England States put together; while all the Middle Atlantic States united are about two thirds the size of Texas.

2. **Coast.**—The coast-line of the Middle Atlantic States is chiefly of sandy loam. Its harbors are among the best on the Atlantic seaboard.

3. **Alluvial Country.**—Land that is formed of what the sea has cast up and of what the rivers have brought down from the mountains is called *alluvial*.

The seaboard of the Middle Atlantic States, and of all the country to the southward, is alluvial.

As we go south the breadth of this alluvial country increases. It follows the coast-line until we reach the mouth of the Mississippi, and extends far up on both sides of that river, embracing large portions of Illinois, Indiana, and Ohio. The coral, the sea-shells, and other marine fossils which are found in that section show that there also the sea once rolled its waves. A large portion of the best and richest countries of the world are *alluvial*.

4. **Surface.**—The belt of alluvial country which borders the Atlantic is called the Tide-water or low country. Its inland limits are marked by falls and rapids; as those of the Delaware at Trenton, of the Schuylkill at Philadelphia, of the Patuxent near Baltimore, of the Potomac at Georgetown, of the Rappahannock at Fredericksburg, and of the James at Richmond.

Beyond the Tide-water Belt is the Upland Region, a broad and fertile strip of rolling and hilly country.

MAP STUDIES.

General Questions.—Between what parallels do these States lie? Which State is most mountainous? Which has the largest number of lakes? Which is without seacoast? Which border on the great lakes? Bound each State.

New York.—What mountains in the northern part of the State? In the south-eastern? Where are the Catskill Mountains? What lakes form part of the boundary between New York and Canada? What two rivers? What river enters Lake Erie and Ontario? What celebrated Falls here?

Describe the course of the Hudson. What tributary has it? Describe the course of the Genesee River. The Black. What lakes are drained by the Oswego River? How do their waters reach the sea? What river forms part of the boundary between New York and Pennsylvania? Into what does it flow?

What lake separates New York and Vermont? Where is Lake George? Trenton Falls? What two islands belong to New York (see small maps)? Where is New York City? Where is Yonkers? Poughkeepsie? What large city on Long Island? What and where is the capital? Where is Buffalo? What canal connects Buffalo and Albany? Where is Rochester? Oswego? Syracuse? Elmira? Utica? Binghamton?

New Jersey.—What portion of this State is mountainous? What river forms the western boundary? What bay, the southern? Where is Sandy Hook? What cape at the southern extremity of the State? What and where is the capital? Where is Newark? Jersey City? Paterson? Hoboken? Elizabeth?

Pennsylvania.—What parallel forms the northern boundary of this State? What river the eastern? What lake borders the north-western corner? What large river crosses this State and flows into Chesapeake Bay? What part of the State is traversed by mountain ranges? In what direction do they extend?

Through what part of the State does the Alleghany River flow? The Monongahela? Where do they unite? Where is the Delaware Water-Gap? Where is Philadelphia? What and where is Harrisburg? Where is Pittsburgh? Scranton? Reading? Lancaster?

Routes of Travel.—How would you go by steamboat from New York to Albany? From New York to Philadelphia? How do steamers enter the Sound from New York? *Ans.* By passing through East River, an arm or estuary of Long Island Sound, improperly called a river.

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Next we have the Mountain Region, which is traversed from northeast to south-west by the Blue Ridge, the Alleghanies, and other ranges of the Appalachian system.

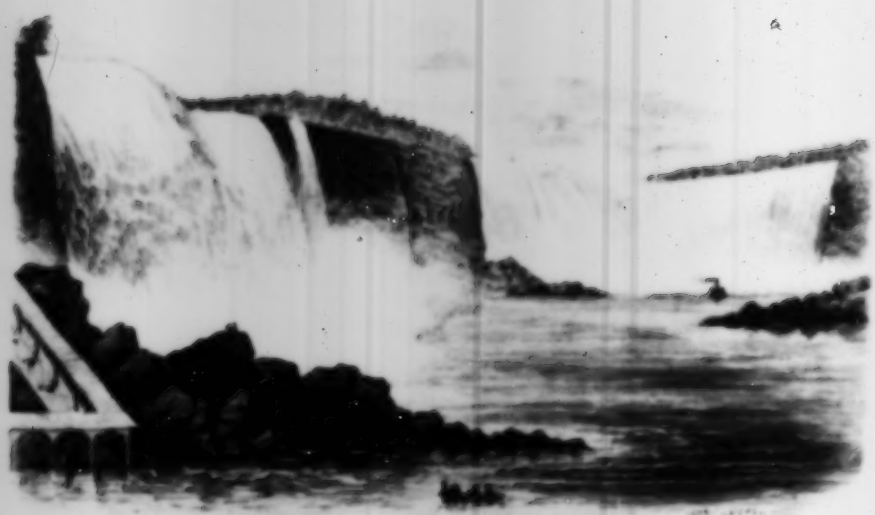
In New York are the Adirondack and Catskill Mountains, which are outlying spurs of the Appalachians. They contain the highest peaks in this group of States.

The Middle Atlantic States are divided by the mountains into two grand slopes: one of which inclines toward the south-east, and carries the drainage off into the Atlantic Ocean; and the other to the north-west, with drainage both into the Great Lakes, by numerous small streams, and into the Gulf of Mexico through the Ohio and Mississippi rivers.

Thus we see that these States lie partly in the Mississippi Valley, partly on the basin of the Great Lakes, and partly along the Atlantic Slope.

5. **Rivers and Lakes.** The principal rivers of the eastern slope are the Hudson, one of the most important water routes to the sea, the Delaware, the Susquehanna, the Potomac, and the James. On the western slope are the Alleghany, the Monongahela, and the Great Kanawha, all of which enter the Ohio.

Here and there gaps occur in the mountains through which the rivers pass. Thus the Hudson, the Delaware, the Susquehanna, the Potomac, and the James find their way to the Atlantic Ocean. Such water-gaps are found in all mountainous countries, and usually the scenery about them is very beautiful, wild, and grand.



The lakes are chiefly in the State of New York.

The Falls of Niagara, also, over which the waters of the Great Lakes descend on its way to the Atlantic, are partly within this State.

6. **Climate.** — The Gulf Stream with its tepid waters sweeps close to the shores of the Middle Atlantic States, and tempers their climate. Their northern section has a temperature similar to that of New England; the southern is much warmer.

7. **Minerals.** — All of these States, except Delaware, are rich in iron. Coal abounds in Pennsylvania, Maryland, and the Virginias; zinc in New Jersey; salt in New York, and petroleum in Pennsylvania.

8. **Pursuits and Products.** The leading pursuits are agriculture, manufacturing, mining, and commerce. The milder climate and richer soil of this section make agriculture more profitable than in New England.

The grains, orchard fruits, berries, and garden vegetables do well in all these States.

Still, so great is the town and city population of this section, and also of New England, in comparison with their rural population, that as we pass in review State after State, from Maine toward the south, we find some of them producing corn and wheat enough for their own consumption until we come to Maryland. This is the first State that produces, annually, enough and to spare.

The hay and wool crops, and the dairy products of New York and Pennsylvania are very large.

Maryland and Virginia produce and export large quantities of tobacco.

MANUFACTURING is also a leading industry in these States, as it is in New England. The principal manufactures are cotton, woollen, silk, leather and iron goods, flour, meal, and agricultural implements.

New York and Pennsylvania rank first among the Middle Atlantic States in manufacturing.

THE COMMERCE of these States is more important than that of any other portion of the country.

Most of the railways and canals which traverse our great agricultural and mining regions bring their freight to the seaboard cities of this section. The chief commercial cities are New York, Philadelphia, Baltimore, Richmond, and Norfolk.

The exports are wheat, flour, corn, cotton, tobacco, live-stock, and manufactured articles.

Questions. — Name the Middle Atlantic States. 1. Compare these States with New England. Which is the largest? Smallest? 2. What is said of the coast-line? Harbors? 3. Describe the alluvial country. What is said of the alluvial country of the United States? 4. Describe the Tide-water belt. The Upland region. What mountains traverse these States? What mountains in New York? Describe the great slopes into which these States are divided by the mountains. 5. Name the principal rivers of the eastern slope. Name those of the western slope. What river receives the water of this slope? What is said of the water-gaps? The lakes? Niagara Falls? 6. What is said of the climate? 7. What are the mineral productions? 8. The leading pursuits? The principal agricultural productions? As you travel south along the seaboard from Maine, which is the first State you come to that produces breadstuff enough for home consumption? What are the chief crops of New York and Pennsylvania? Of Maryland and Virginia? Name the principal manufactures. What States rank first in manufacturing? What is said of commerce? What of the great railways and canals? Exports?

XXVIII. NEW YORK, NEW JERSEY, AND PENNSYLVANIA.

1. **NEW YORK.** — New York, the "Empire State," ranks first among the States in wealth, population, and commerce, and is one of the most prominent in manufactures.

The climate of Western New York is tempered by the Lakes, which soften the west winds as they sweep over them. This part of the State has, moreover, a fertile soil. It is therefore a fine agricultural country. Wheat, corn, and the hardier orchard fruits flourish here.

New York produces more butter and hay than any other State.

The chief mineral resources of this State are its salt-springs and iron ores.

The falls and rapids of Niagara have a descent of about 300 feet. They therefore show that Lake Erie is on a terrace 300 feet above Lake Ontario. The smaller lakes, which give such a charm to the scenery in the western part of the State, are situated on the same terrace with Lake Erie; consequently the Genesee and Oswego rivers, which carry the water of these lakes into Lake Ontario, have, like the Niagara, to leap a precipice in order to escape from this terrace. Their rapid falls afford fine water-power.

SCENE IN BROADWAY, NEW YORK.

2. The city of NEW YORK is the emporium of trade for the whole country, and the largest and richest city in the New World. It is noted for its public buildings, libraries, churches, and banks.

It is the seat of Columbia College, one of our oldest and most illustrious seminaries.

Brooklyn, on Long Island, is the third city in the Union. It is so closely connected with New York that they practically form one city. A magnificent suspension bridge, the longest in the world, unites them.

Albany, the capital of the State, is one of the most important inland towns in the Middle States.

It is situated at the head of navigation, on the right bank of the Hudson, and at the mouth of the Erie Canal, where boats from the lakes freighted with the produce of the Central States enter the Hudson.

3. Buffalo, at the eastern end of Lake Erie and the western end of the Erie Canal, is an important depot for grain and other produce.

Rochester, on the Genesee, and Oswego, at the mouth of the Oswego River, possess fine water-power, and are extensively engaged in milling and manufacturing. Grain is sent to them even from Canada and the West.

The salt-springs at Syracuse, which are owned by the State, are the most productive in the country. The water is sold to the salt-makers, who produce annually about one-sixth of all the salt that is consumed in the United States.

Troy has ample water-power, which is employed in various manufacturing purposes.

Saratoga is celebrated for its mineral springs.

The country bordering upon the Hudson is in a high state of improvement. Handsome houses and beautiful grounds meet the eye at every turn, and lend enchantment to the scenery. The right bank, some distance above New York, is rendered bold by columns of basaltic rock, called the "Palisades," that rise perpendicularly to the height of four or five hundred feet. The Military Academy at West Point is on the right bank of this beautiful river.

4. **NEW JERSEY.** New Jersey lies almost entirely in the "alluvial country" or Tide-water region of the Atlantic seaboard, and has a mild climate. It is, therefore, specially adapted to agriculture.

This State is famous for its fruits. It is largely devoted to market gardening, and supplies New York and Philadelphia with fruit and vegetables.

New Jersey is rich in mines of iron and zinc, and in deposits of marl, a kind of earth used for fertilizing.

5. There are several flourishing manufacturing towns in this State.

Newark, the largest city, is noted for its manufactures of india-rubber, leather goods, clothing, and jewelry.

Paterson, at the Falls of the Passaic, is celebrated for railway locomotives and silk goods.

Jersey City, at the mouth of the Hudson, is largely engaged in manufacturing.

Princeton is the seat of the College of New Jersey, one of the most celebrated literary institutions in the United States.

Trenton, at the head of navigation on the Delaware, is the capital. It has extensive roll-mills.

6. **PENNSYLVANIA.** Pennsylvania, the "Keystone State," is the leading mining State in the Union. It supplies half the iron, more than half the coal, and nearly all the petroleum produced in the United States.

The coal of Pennsylvania is the chief article of fuel used throughout the Middle Atlantic and New England States for domestic purposes, for smelting, and for the production of steam power.

Anthracite coal is found in the eastern part of the State, and bituminous in the western.

The petroleum of Pennsylvania is more used than any other article for the production of artificial light.

It is one of our chief articles of export, and is sent to all parts of the world.

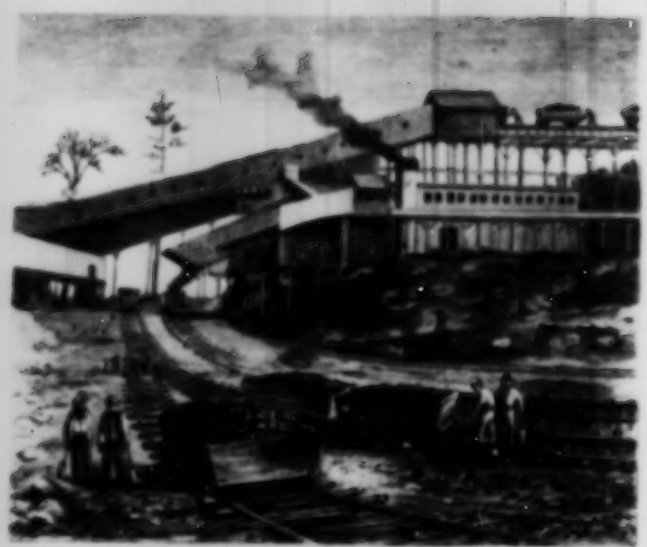
The richest known oil wells are in the upper valley of the Alleghany River. They yield many thousand barrels every day.

The soil and climate of Pennsylvania are well adapted to agriculture. The grain crops and grazing products are important.

The German farmers of this State are noted for their good husbandry.

7. PHILADELPHIA is the greatest manufacturing centre and coal depot in the United States. It ranks as the second city in the country in population, and the third in commerce.

It is celebrated for its fine markets, medical schools and academies, its charitable institutions, and buildings of historic interest. Its most famous public building is the State House, where the Declaration of Independence was signed, July 4th, 1776.



A LOCOMOTIVE AND CARS.

Pittsburgh is situated at the junction of the Alleghany and Monongahela rivers, which unite here to form the Ohio.

It is extensively engaged in manufacturing iron, glass, brass, and copper. It is the great petroleum market of the country, and has a large trade in bituminous coal, with which the neighboring hills abound.

The flourishing cities of Reading, Pottsville, and Scranton are in the coal region, and owe their prosperity chiefly to the coal trade. Harrisburg is the capital of the State.

Questions.—**1.** How does New York rank in wealth, in population, in commerce, in manufactures? What two causes make Western New York a fine agricultural country? For what products is New York famed more than any other State? What is said of its minerals? How much higher is Lake Erie than Lake Ontario? What is said of the Genesee and Oswego rivers? **2.** What is said of New York City? Of Brooklyn? To what does Albany owe its importance? **3.** What is said of Buffalo? Rochester? Oswego? Where are the salt-springs? What is said of Troy? What of the scenery of the Hudson? Where is West Point? **4.** What two causes make New Jersey especially adapted to agriculture? For what is New Jersey famous? What is said of its minerals? **5.** For what industries are Newark and Paterson noted? What is said of Jersey City? Princeton? Trenton? **6.** In what does Pennsylvania surpass every other State? How much of our iron does she produce? Of our coal? Petroleum? What are the great uses of the coal of Pennsylvania? Where is anthracite coal found? Where bituminous? What is said of the export of petroleum? Where are the richest petroleum wells? What agricultural products are important? **7.** What is said of Philadelphia? Name its most famous building. Where is Pittsburgh? What does it manufacture? Of what is it the greatest market in the country? To what do Reading, Pottsville, and Scranton owe their prosperity? What is the capital?

XXIX. DELAWARE, MARYLAND, VIRGINIA, AND WEST VIRGINIA.

1. DELAWARE.—Delaware, like New Jersey, lies mostly in the alluvial region. It is poor in minerals, but rich in soil, and favored with a mild climate.

It is therefore a fine fruit country, and is specially famed for its peaches. The people are largely employed in supplying the markets of Philadelphia, New York, and Baltimore with fruits and vegetables.

Wilmington, the principal city, is extensively engaged in manufacturing gunpowder, railroad cars, paper and flour, and in building iron steamships.

Dover is the capital.

2. MARYLAND.—The peninsula between the Delaware and Chesapeake Bays belongs in part to Delaware, in part to Maryland, and in part to Virginia. It rises but little above the sea-level, and is without mountains.

The winter climate of this "Eastern Shore," as it is called, is one of peculiar mildness.

It is tempered by the warmth of the Gulf Stream on the one hand, and by the open waters of the Chesapeake Bay on the other. In summer the atmosphere is cooled by constant sea-breezes.

MAP STUDIES.

General Questions.—Name the States represented on this map. What parts of these States are mountainous? In what direction do the mountains extend? Which State has no seacoast? What States nearly inclose Chesapeake Bay?

Delaware.—Has Delaware any mountains or large rivers? Within what region, then, does it wholly lie? What bay and river form the eastern boundary? What cape at the mouth of the bay? What is the capital of the State, and where? Where is Wilmington? New Castle?

Maryland.—Describe the surface of the eastern part of Maryland. The eastern part. What river separates Maryland from Virginia and West Virginia? What great bay divides this State? How long is it, measuring by the scale of miles? What important river enters the head of this bay?

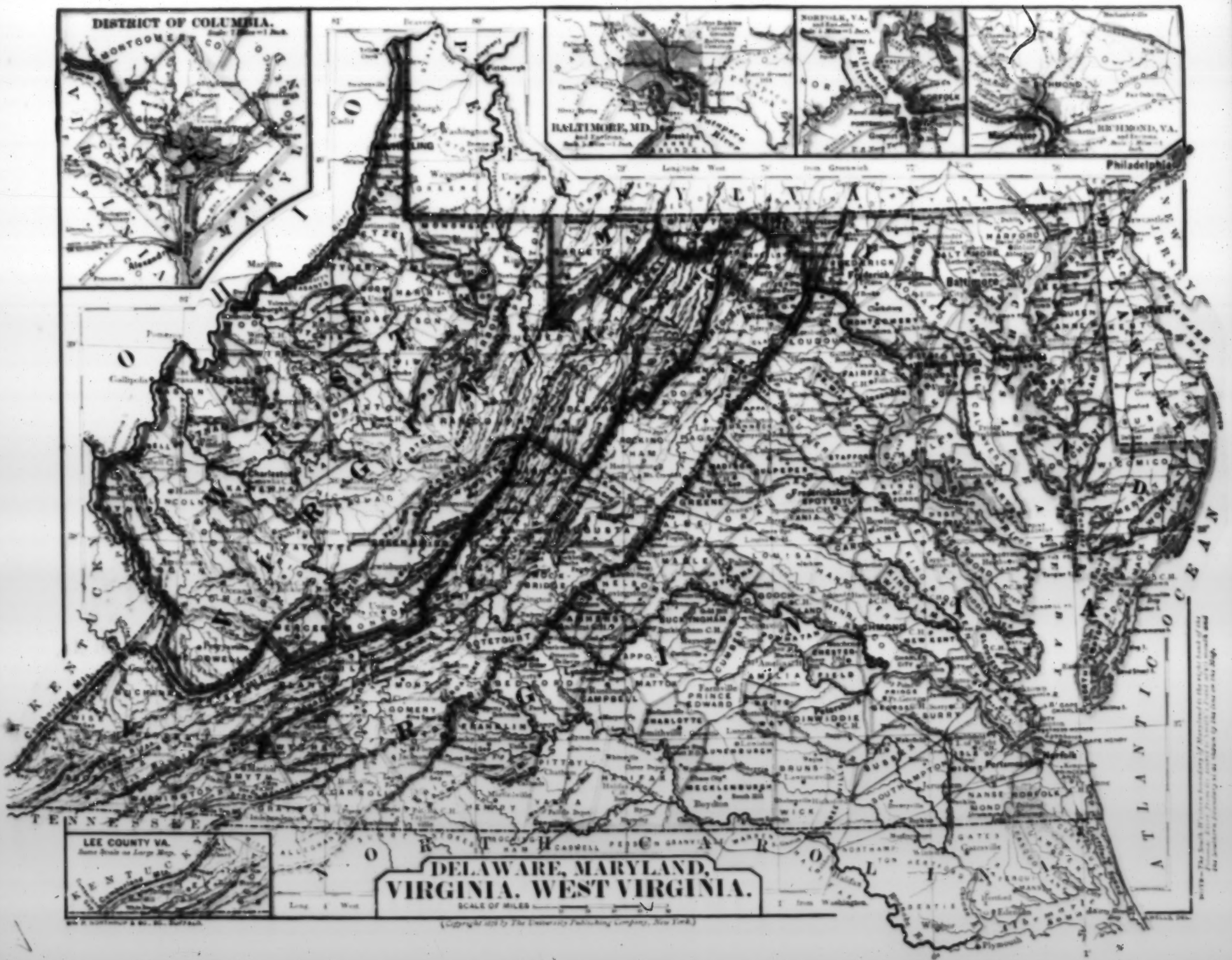
Where is Point Lookout? What large city near the mouth of Patapsco River (see small map)? What is the capital, and where? Where is Frederick? Hagerstown? Cumberland? Ocean City?

District of Columbia.—What river forms the southwestern boundary of the district? What State nearly surrounds it? What important city does it contain? Where is Georgetown?

Virginia.—What mountain ranges traverse Virginia? What ranges form a large part of the western boundary? What mountains divide Virginia and Kentucky? What river forms the southern boundary? How does the eastern portion of Virginia compare with the western? What great bay intersects the eastern part of Virginia? What two capes at its entrance? What rivers enter this bay? What three rivers break through the Blue Ridge? What is the capital? What two cities on the Delaware River (see small map)? Where is Alexandria? Fredericksburg? Staunton? Winchester? Danville? Lexington? Salem?

West Virginia.—What mountains separate West Virginia from Virginia? What rivers form the western boundary? What rivers flow into the Ohio? What is the principal river in the State? What is the outlet? What river rising in this State and flowing into the Atlantic? Where does it break through the Blue Ridge? What river joins it here? What is the capital of the State, and where? Where is Charleston? Parkersburg? Martinsburg? Huntington?

Routes of Travel.—On what bodies of water would you sail in going from Baltimore to Philadelphia? How would you go in a steamboat from Washington to Richmond? Norfolk to Wilmington? Annapolis to Fredericksburg? Wheeling to Charleston? What mountain ranges would you cross in going by railroad from Richmond to Huntington on the Ohio?


DISTRICT OF COLUMBIA.
BALTIMORE, MD.
NORFOLK, VA.
RICHMOND, VA.
Philadelphia
LEE COUNTY VA.
DELAWARE, MARYLAND,
VIRGINIA. WEST VIRGINIA.
SCALE OF MILES
ATLANTIC OCEAN
TENNESSEE
KENTUCKY

Tobacco and grain are the leading agricultural productions of Maryland.

The western part of the State is crossed by ranges of the Appalachians which abound in coal and iron. Mining, therefore, constitutes an important industry in this part of the State.

Chesapeake Bay is remarkable for the fish and game with which its shores and waters abound. Its shad and herring fisheries are very valuable. Seventy species are used by the fishermen.

The canvas-back duck, the terrapin, and the oyster of the Chesapeake Bay, are unsurpassed in flavor and excellence.

From the oyster-beds of this bay the oyster-sellers of the West are chiefly supplied. So great is the value of its fisheries, that Chesapeake Bay has been compared to the gold mines of California.

3. BALTIMORE is one of the leading commercial cities of the country, and a great manufacturing centre. It has extensive flour mills, ironworks, cotton factories, and fruit and oyster canning establishments. Its chief exports are flour, grain, and tobacco.

The Baltimore and Ohio Railroad connects it with the leading commercial cities of the Valley of the Mississippi, and makes it one of the important outlets for the products of that region.

Annapolis is the capital of the State, and the seat of the United States Naval Academy.

Cumberland is the chief mining town in the State.

Frederick is an important manufacturing town. It is in the midst of a rich agricultural region.

4. District of Columbia.—The District of Columbia embraced originally an area of 100 square miles.

It was ceded in 1790 to the United States, in part by Virginia and in part by Maryland, for the purpose of establishing here the seat of the General Government.

In 1846 Congress ceded back to Virginia the portion on the right bank of the Potomac which had belonged to her, so that now the District contains only about 64 square miles.

It was called the District of Columbia in honor of Columbus. It is governed by a Board of Commissioners appointed by Congress.

5. The cities of the District are Washington and Georgetown. WASHINGTON, the Capital of the United States, was planned by General Washington.

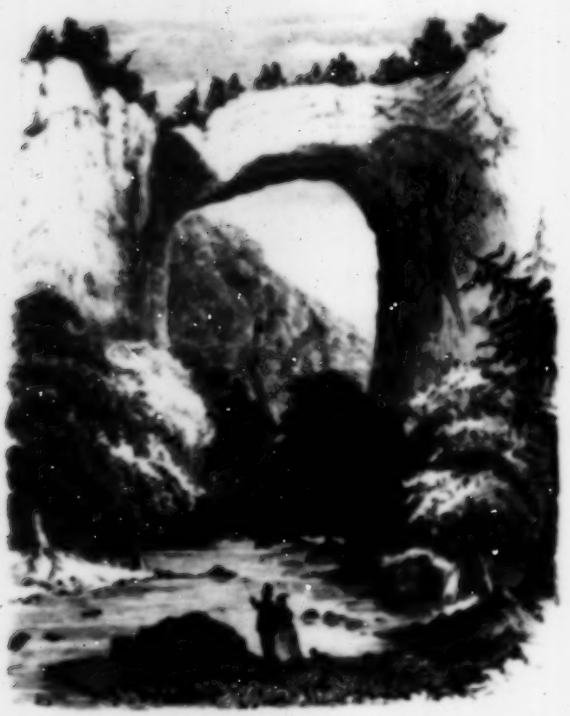
It is beautifully laid out, on the left bank of the Potomac, and contains many interesting and important public buildings, the principal of which are the Capitol, United States Treasury, Patent Office, Smithsonian Institute, Naval Observatory, and the White House.

Georgetown is extensively engaged in the manufacture of flour. It is connected with Alexandria by the canal which crosses the Potomac at Georgetown, over a magnificent aqueduct.

6. VIRGINIA.—Virginia, the oldest of the "Original Thirteen," is sometimes called the "Old Dominion." It is one of the largest of the Atlantic States.

The Alleghany Mountains and the Blue Ridge cross the State nearly parallel to each other. The country lying between them, varying in breadth from 50 to 70 miles, is the celebrated Valley of Virginia. It is the garden-spot of the State.

The wonderful Luray Caves, which rival the Mammoth Cave of Kentucky in grandeur and beauty, Weir's Cave, and the Natural Bridge, with its singular archway of rock, are all in this valley, and are objects of great interest to tourists.



NATURAL BRIDGE.

Several rivers of importance rise in the mountains and flow across the State into the Atlantic. They are navigable in the Tide-water Region, and in the upper portion of their course furnish ample water power.

Virginia is rich in coal and iron, and is one of the leading States in the production of tobacco and garden vegetables.

Its oyster beds furnish most of the oysters consumed in the United States.

7. Richmond, the capital, has extensive flour mills, large foundries, and a great number of machine-shops.

It is the chief railroad centre of the State.

Norfolk is the principal seaport, and has an important commerce. Its harbor is not surpassed in the United States. At Portsmouth is a navy-yard of the United States.

Petersburg is an important manufacturing city, and has a large trade in grain and tobacco.

Lynchburg has a climate particularly favorable to the "curing" of tobacco. It contains 40 tobacco factories.

Alexandria, at the terminus of the Chesapeake and Ohio Canal, has a good trade in flour and grain. The University of Virginia, one of our most noted seats of learning, is at Charlottesville. Mt. Vernon was the home of Washington.

8. **West Virginia.**—In 1862 the north-western portion of the "Old Dominion" was organized as a separate State, under the name of West Virginia.

OIL WELLS.

The mountains of this State abound in iron and in every variety of coal. In its valleys are salt-springs, petroleum wells, and mineral waters. Among the last are the celebrated White Sulphur Springs.

9. Wheeling, on the Ohio, is the largest city and the capital. It is surrounded by hills containing valuable deposits of bituminous coal.

Charleston, on the Kanawha River, is noted for its valuable salt-springs.

The brine is obtained by boring down through the rocks below the bed of the river. The Kanawha salt is extensively used by the meat-packers of Cincinnati.

Parkersburg is an important town, with an active river trade.

Questions.—1. What is said of the surface and soil of Delaware? What are its productions? What manufactures are carried on at Wilmington? Name the capital. 2. Of what peninsula does Maryland occupy a part? To what other States do parts of this peninsula belong? What makes the climate of the "Eastern Shore" a peculiarly mild one? What are the chief products of Maryland? Where are the coal mines of this State? For what is Chesapeake Bay remarkable? What of its oyster-beds? 3. What is said of Baltimore? Its exports? What is said of Annapolis? Cumberland? Frederick? 4. What State ceded the present District of Columbia to the United States? What other ceded a part of the original district? For what purpose was it ceded? Why is it called District of Columbia? How is it governed? 5. What is Washington City? What does it contain? What is said of Georgetown? 6. What is Virginia sometimes called? What mountains cross this State? Describe the Valley of Virginia. What objects of interest in this Valley? What of the rivers? The minerals? In what productions is this a leading State? What of its oyster-beds? 7. What is said of Richmond? Of Norfolk? Portsmouth? Petersburg? Lynchburg? Alexandria? Charlottesville? Mt. Vernon? 8. When was West Virginia organized? In what do its mountains abound? What are found in the valleys? 9. Describe Wheeling. For what is Charleston noted? What of Parkersburg?

SOUTHERN STATES.

XXX. GENERAL DESCRIPTION.

STATES.	AREA IN SQ. MILES.	POPULATION, 1870.	CAPITALS.	CHIEF CITIES AND TOWNS.	POPULATION.
North Carolina	50,704	1,071,361	Raleigh	Wilmington	13,446
South Carolina	34,000	705,606	Columbia	Charleston	48,956
Georgia	58,000	1,184,109	Atlanta	Savannah	28,233
Florida	64,294	187,748	Tallahassee	Pensacola	3,347
Alabama	50,722	996,992	Montgomery	Mobile	32,034
Mississippi	47,156	827,922	Jackson	Natchez	9,041
Louisiana	41,346	726,915	Baton Rouge	New Orleans	191,422
Texas	274,356	818,579	Austin	Galveston	13,818
Arkansas	52,198	484,471	Little Rock	Little Rock	12,380
Tennessee	45,600	1,258,520	Nashville	{ Memphis { Nashville	40,226 25,572
Indian Territory	68,991	68,147	(Not organized)	Tahlequah	1,000

1. **Position, Size, and Population.**—The Southern States lie between the parallels of 25° and 37° north. They embrace about the same breadth of latitude as the Middle Atlantic and the New England States together, and contain three times the area of these two sections.

The population of the Southern States, however, is far less dense than that of New England and the Middle Atlantic States.

2. **Coast.**—The shores of the Southern States are curtained with a chain of long, narrow, sandy islands. Navigable inlets and passages occur here and there, but these are obstructed by sand-bars which prevent the entrance of the largest vessels.

3. **Surface.**—The surface of the Southern States resembles that of the Middle Atlantic States. Bordering the sea is the Tide-water Belt, which in the Southern States attains its greatest breadth, being from 100 to 300 miles wide.

Next we have an Upland Country, and finally a Mountain Region embracing portions of the Appalachian system.

The mountains divide these States, east of the Mississippi, into three slopes, inclining severally to the east, south, and west, and sending their streams and rivers off into the Atlantic Ocean, into the Gulf of Mexico, and into the Mississippi River.

West of the Mississippi the principal elevations are the Boston Mountains in North-western Arkansas, and the outlying spurs of the Rocky Mountains in Western Texas.

4. **Forests.**—As we go from the sea inland, we cross, first, a belt of swamps covered with the cypress, the palmetto, the magnolia, and the live-oak.

Next we come to a sandy belt overgrown with pines and called the "Pine Barrens."

Leaving this piny belt and crossing the fertile region known as the Upland Country, we reach a belt of oaks and other deciduous trees which clothe the slopes of the mountains.

The swampy belt extends from Virginia to the Everglades of Florida, and along the shores of the Gulf to the Isthmus of Tehuantepec. It is noted for its prodigal moisture, parasites, and flowers. The mosses hung down in long and graceful festoons from the branches of the trees, imparting to the forest scenery a striking and picturesque feature. Among the flowers are the magnolia grandiflora and the yellow jessamine, the loveliest of them all.

The live-oak forests of the swamps belt furnish the most valuable timber for shipbuilding. The pine belt is famed for its timber and naval stores—tar, pitch, rosin, and turpentine.

5. Rivers and Lakes.—The principal rivers of the Atlantic and Gulf slopes are navigable through the lowlands, to the sand hills of the Upland Country. The limits of navigation are marked by falls or rapids, which afford ample water-power.

The Mississippi and its southern tributaries drain a portion of these States, and furnish important water routes for the products and merchandise of this section.

Florida and Louisiana abound in excellent lakes.

6. Minerals.—In the mountainous parts of the Southern States are found coal, iron, copper, lead, granite, and marble.

Gold mines are worked in the hill country of Georgia and North Carolina; salt beds in Louisiana. The whetstones of Arkansas are among the very best.

7. Climate and Occupations.—The climate of the northern portion of these States is mild and well adapted to the cultivation of grain, tobacco, fruits, and vegetables. That of the southern part is semi-tropical, and admirably suited to the growth of sugar-cane, cotton, rice, and tropical fruits.

The winds from the Gulf bring frequent summer rains, and give to the southern parts of Arkansas, Mississippi, and Louisiana a greater rainfall than that of any other portion of the country east of the Rocky Mountains.

The occupations of the Southern States are chiefly agricultural. Much attention is given to the raising of flocks and herds. Manufacturing and mining are rapidly growing in importance.

INFLUENCE OF INVENTIONS.—The industrial pursuits of the Southern States have been greatly affected by the invention of the cotton-gin, the spinning-jenny, and the power-loom.

One hundred years ago the cultivation of cotton in the Southern States was confined to a small patch on each farm, capable of producing a few pounds only. The seeds were picked from the cotton by hand, and the cotton spun and woven by the women of the family into home-spun.

The cotton-gin removes the seed from the cotton. In a few minutes it cleans as much work as a whole family could do in a week. The spinning-jenny and the power-loom can spin and weave as much cotton in a day, as a woman could in a year.

When these inventions were made, people said at once that the cultivation of cotton on a large scale would be exceedingly profitable. Thus cotton-planting became the great industry of the Southern States. More and more was raised, until the annual crop is now about 4 or 5 million bales. An invention known as the Cotton Attachment to the spinning-jenny frees the cotton from seed and spins it into yarn on the plantation. Should this improvement be adopted, it is probable that in no long time the South will export spun yarn rather than raw cotton.

COMMERCE.—The commerce of these States consists chiefly in the exportation of the great staples, cotton, sugar, rice, lumber, and naval stores. Numerous railways and navigable rivers afford ample means of transportation. The leading commercial cities are New Orleans, Savannah, Charleston, Mobile, and Galveston.

Questions.—1. Name the ten Southern States. Between what parallels do they lie? How do they compare in size with the New England and Middle Atlantic States? How in population? 2. What is said of the coast-line? What obstruct the harbors? 3. How does the surface of the Southern States resemble that of the Middle Atlantic? Into what slopes do the mountains divide the Southern States east of the Mississippi? Into what do the rivers flow? What elevations west of the Mississippi? 4. Describe the coast belts. What is said of the live-oak forests? For what is the pine belt famed? The swamps belt? 5. How far are the rivers of the Atlantic and Gulf slopes navigable? What mark the limits of navigation? What is said of the Mississippi and its southern tributaries? Where are the lakes found? 6. What minerals in the mountainous region? What especially in Georgia and North Carolina? In Louisiana? Arkansas? 7. What is said of the climate? Of the rainfall in the Gulf States? What are the occupations? What inventions have affected the industries of these States? What effect did they produce? What further change is probable? What are the principal exports? The chief commercial cities?

XXXI. NORTH CAROLINA AND TENNESSEE.

1. North Carolina and Tennessee.—North Carolina, the "Old North State," and Tennessee are mainly between the same parallels of latitude. Except in the "Tide-water Country" of North Carolina, the industries of the two States are similar.

Both States are admirably adapted to the growth of grain, tobacco, flax, and hemp. The vine, fig, and peach, with other orchard fruits, are produced, as well as melons, peanuts, and sweet potatoes. In the southern sections cotton is extensively cultivated.

The territory constituting Tennessee once belonged to North Carolina, and was settled chiefly by emigrants from that State. Daniel Boone, the celebrated backwoodsman, who led the way for settlers, both into Kentucky and Tennessee, was a North Carolinian.

2. NORTH CAROLINA.—The highest mountains east of the Mississippi are situated in this State. Mt. Mitchell, in Yancey County, is nearly 7,000 feet high.

North Carolina is one of the leading States in the production of tobacco.

The "Tide-water Country" abounds in cypress swamps and forests of pitch-pine. The cutting of lumber, cypress staves and shingles, and the gathering of naval stores, are leading industries.

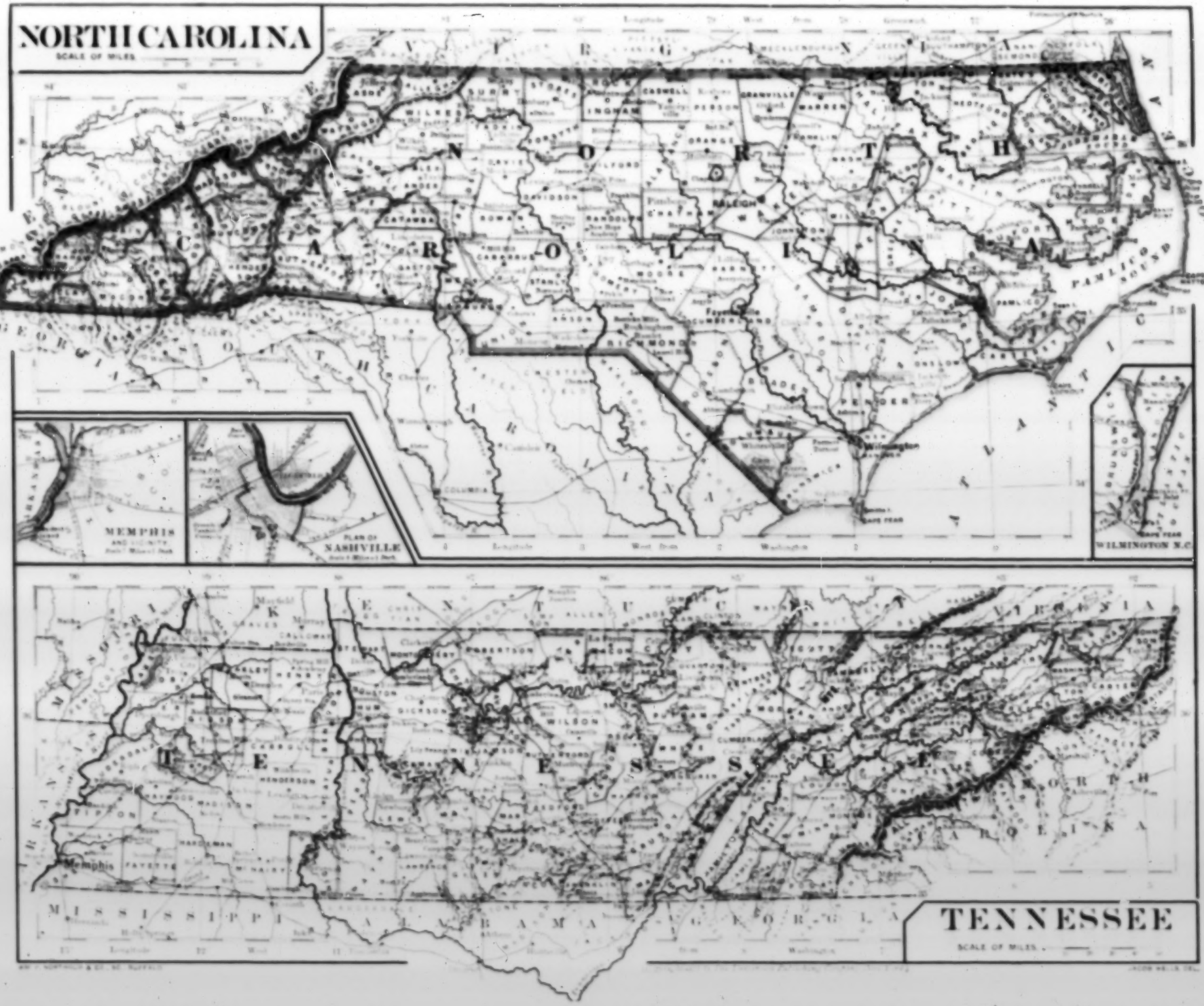
MAP STUDIES.

North Carolina.—What is the eastern boundary of North Carolina? What portion of the State is mountainous? What mountains form the western boundary? What mountain range crosses the State? Where is Mt. Mitchell or Black Dome? Where are Bald-ham Mountains? Coweé Mountains? Newfound Mountains? Judging by the rivers, in what direction does the eastern part of the State slope? Where do the Yadkin and Catawba go? In what direction do they flow? Where do the Tennessee and French Broad Rivers rise? In what direction do they flow? What, then, is the watershed of these four rivers? (The Blue Ridge here separates the Valley of the Mississippi from the Atlantic slope.)

Name the capes on the coast. What sounds in the eastern part of the state? What separates these sounds from the sea? (See A series of long narrow, sandy islands. What is Roanoke Island? What river flows into the Atlantic near Cape Fear? What and where is the capital? What river flows into the Atlantic near Cape Fear? Where is Wilmington? Fayetteville? New Bern? Charlotte? Weldon? Goldsboro? Statesville? Chapel Hill?

Tennessee.—What mountains separate Tennessee and North Carolina? What is the eastern boundary of Tennessee? How does the latitude of Tennessee compare with that of North Carolina? The principal rivers? What large river with its tributaries, crosses the State twice? What part of the State is traversed by the Cumberland? What rivers enter the State from North Carolina? What rivers flow into the Mississippi directly from this State? What and where is the capital? Where is Memphis? How many railroads terminate in Nashville? In Memphis? Where is Knoxville? Chattanooga? Columbia?

Routes of Travel.—Upon what bodies of water would a steamboat go from Washington to New Bern? Beaufort to Weldon? Charleston to Knoxville?


NORTH CAROLINA
SCALE OF MILES
VIRGINIA
TENNESSEE
GEORGIA
SOUTH CAROLINA
NORTH CAROLINA
ATLANTIC OCEAN
MEMPHIS
PLAN OF NASHVILLE
WILMINGTON N.C
KENTUCKY
VIRGINIA
TENNESSEE
NORTH CAROLINA
MISSISSIPPI
ALABAMA
GEORGIA
Memphis
SCALE OF MILES

Naval stores are all products of the yellow pitch-pine. Large quantities are gathered in this region. The turpentine is obtained by "blazing" the tree, and allowing the gum to drop into a box placed to receive it, or into a deep notch cut into the tree.

Many of the pine trees are very tall and straight, and make the finest masts and spars for ships. Large numbers of them are sent to the dock-yards of France and England.

SCRAPING CRUDE TURPENTINE.

Portions of the "Tide-water Region" are well adapted to the cultivation of rice.

In the "Upland Country" of this State valuable gold mines are found.

Albemarle Sound is famed for its fisheries. More than a million herrings are sometimes caught at a single haul.

3. Raleigh is the capital. Wilmington is the chief place of export for naval stores, lumber, rice, and cotton. It contains many saw-mills and turpentine distilleries.

New Berne is noted for its pea-nut, vegetable, and melon trade.

Charlotte is an important town in the south-west. Durham contains the largest tobacco factory in the world.

Chapel Hill is the seat of the University of North Carolina, an old and excellent institution.

4. TENNESSEE.—Tennessee is naturally divided into three sections: East, Middle, and West Tennessee.

East Tennessee comprises the country between the Alleghany and Cumberland Mountains. It is mountainous and rich in coal, iron, and copper. Its marbles are of great beauty and variety.

It contains the Upper Tennessee Valley, which, as an agricultural and stock-growing district, is unsurpassed. Its climate permits the Malaga grape, the fig, and the pomegranate to flourish in the open air.

Middle Tennessee is a rolling country, extending from the Cumberland Mountains westward to the Tennessee River. It excels in the production of wheat, corn, and tobacco, and is the most populous of the three divisions.

West Tennessee is a level region, and well adapted to the growth of cotton.

The Tennessee River is navigable from its mouth up to Florence, where navigation is interrupted by the "Muscle Shoals." Above this point small steam-boats ascend the river a distance of several hundred miles.

5. Memphis derives its importance from its situation on the Mississippi.

It is the largest city in the State, and the chief cotton port for the planters of North Alabama and Mississippi, who send their crops from this point by steam-boat to New Orleans.

Nashville, the capital of the State and the commercial centre of Middle Tennessee, is at the head of navigation on the Cumberland River.

Chattanooga is beautifully situated on the Tennessee River, at the junction of a grand system of railroads.

Knoxville is the chief city of East Tennessee.

Questions. **1.** How do North Carolina and Tennessee compare in latitude and pursuits? What are the agricultural products of these States? Who first settled Tennessee? **2.** Where are the highest mountains east of the Mississippi? Name the highest peak. What is said of the cultivation of tobacco? What are the chief industries of the Tide-water Region? What are the products of the pitch-pine? How is turpentine obtained? Where is rice grown? Where are the gold mines of North Carolina? What is said of the Albemarle Sound? **3.** Name the capital. What is said of Wilmington? New Berne? Charlotte? Chapel Hill? **4.** How is Tennessee naturally divided? What is said of East Tennessee? Tennessee Valley? Middle Tennessee? In what does it excel? What of West Tennessee? Tennessee River? **5.** For what section is Memphis the chief cotton port? What is said of Nashville? Chattanooga? Knoxville?

* * *

XXXII. SOUTH CAROLINA AND GEORGIA.

1. South Carolina and Georgia. South Carolina and Georgia resemble each other in physical features. They both front on the Atlantic, and slope from the mountains to the ocean.

Their shores are fringed with the "Sea Islands," which are celebrated for a superior kind of cotton, called the "Sea Island" cotton.

It has a long silky fibre, and is chiefly used for the manufacture of laces and other fine fabrics.

The climate and industries of both these States are the same.

2. SOUTH CAROLINA.—South Carolina is the leading State in the Union in the production of rice. Her "Tide-water Region" has unrivalled advantages for its cultivation.

MAP STUDIES.

General Questions.—Between what parallels of latitude are these States situated? What State forms most of the northern boundary? What river separates South Carolina and Georgia? Which State has the longest coast-line? Is the coast-line much indented? Starting from Columbus, trace the ridge of sand-hills extending across these States. (It is shown by a light mountain line.)

South Carolina.—What mountain range forms the north-western boundary? What river the western? Name the chief rivers. What two form the Santee? What is the Wateree called in the upper part of its course? What river do the Saluda and Broad form? Where is the Great Pedee? Name its principal tributaries. Describe the course of the Edisto. What river south of the Edisto? East of the Pedee? Where is Edisto Island? St. Helena Island? Sullivan's Island? What large city between the mouths of the Ashley and Cooper rivers (see small map)? The capital? Where is Columbia? Spartanburgh? Beaufort? Camden? Newberry?

Georgia.—What part of Georgia is mountainous? What swamp in the south-eastern part of the State? What parallel forms the northern boundary? What river the eastern? What river a part of the western? Name the principal tributaries of the Savannah in this State. Describe the course of the Chattahoochee as shown in this map. The Flint. What two large rivers unite to form the Altamaha? What river south of the Savannah? What two rivers form the Coosa? Where is the Withlacoochee? The Allapaha? Name the islands on the coast. The sounds. Where is Savannah? Augusta? What and where is the capital? Where is Columbus? Athens? Macon? Albany? What city at the head of the Coosa? Where is Brunswick? Milledgeville? Decatur?

Routes of Travel.—How would you go by water from Charleston to Augusta? From Augusta to Macon? From Savannah to Columbus?

OF THE CAROLINAS GEORGIA
ATLANTA, GA.
SAVANNAH, GA.
CHARLESTON
SOUTH CAROLINA
GEORGIA
ALABAMA

3. Columbia, the capital, is a beautiful town. It contains the State University.

Charleston is the principal city and chief seaport of the State. It is the leading rice market of the country, and ships large quantities of cotton. Near the city are vast deposits of phosphates, which are used for fertilizing.

The palmetto, a kind of palm, grows in the streets of Charleston. From this tree South Carolina derives its name, the "Palmetto State."

4. **GEORGIA.**—Georgia is the leading Southern State in manufacturing, and one of the first in the production of cotton and rice.

The hill country produces the finest of wheat, while the rice delights in the lowland along the coast. Cotton, which is the leading staple, flourishes in the central and south-western parts of the State.

The gold mines of this State are worked with profit, and before those of California had revealed their treasures, they were considered very rich. Coal and iron are found in abundance.

5. Savannah is the chief seaport, and an important commercial centre. It exports largely cotton, rice, and lumber.

Atlanta, the capital and largest city, is noted for its workshops, its active trade, and importance as a railroad centre.

Augusta, on the Savannah, and Columbus, on the Chattahoochee, have ample water-power and extensive cotton and woollen mills.

Macon is a thriving and important town. Brunswick ships large quantities of lumber. The State University is at Athens.

Questions.—1. How do South Carolina and Georgia resemble each other? Where does the Sea Island cotton grow? For what is it used? 2. For what product is South Carolina specially noted? 3. What is said of Columbia? Charleston? 4. In what does Georgia excel all other Southern States? In what does she rank among the first? What part of Georgia produces wheat? What part rice? Cotton? What is said of the gold mines? What other minerals are found? 5. What can you say of Savannah? Atlanta? Augusta? Columbus? Macon? Brunswick? Where is the State University?

XXXIII. FLORIDA, ALABAMA, AND MISSISSIPPI.

1. **FLORIDA.**—Florida is mountainless. It is dotted with beautiful lakes and clear, deep springs.

The "Everglades" occupy the southern extremity of the State. They may be described as a great shallow lake with long grass growing from the bottom. The surface is studded with islands, upon which are dense jungles of tropical trees and plants.

Florida fronts both on the Gulf of Mexico and on the Atlantic. Its winters are generally too warm for frost, and yet its summers are so tempered by the sea-breezes that the heat is less oppressive than it is in the latitude of New York.

The soil is adapted to the cultivation of cotton and sugar.

Florida is famous for its oranges and other fruits.

An important industry is the cultivation of early vegetables for Northern markets. In the southern parts of the State the sweet-potato produces, without replanting, for two or three years together.

The live-oak, which abounds here, is one of the hardest and most durable of woods. It is extensively used in ship-building.

Florida is a coral formation. Arranged in a curve, off the southern point of the State, are the Florida Keys, a number of small coral islands.

2. Tallahassee is the capital. Jacksonville is the largest city. San Augustine is the oldest town in the United States.

Key West, upon one of the Keys, is a famous wrecking station.

It is also extensively engaged in the manufacture of cigars, and in sponge-fishing.

Pensacola has one of the best harbors on the Gulf. It is the centre of a large lumber trade. The Government has a navy-yard there.

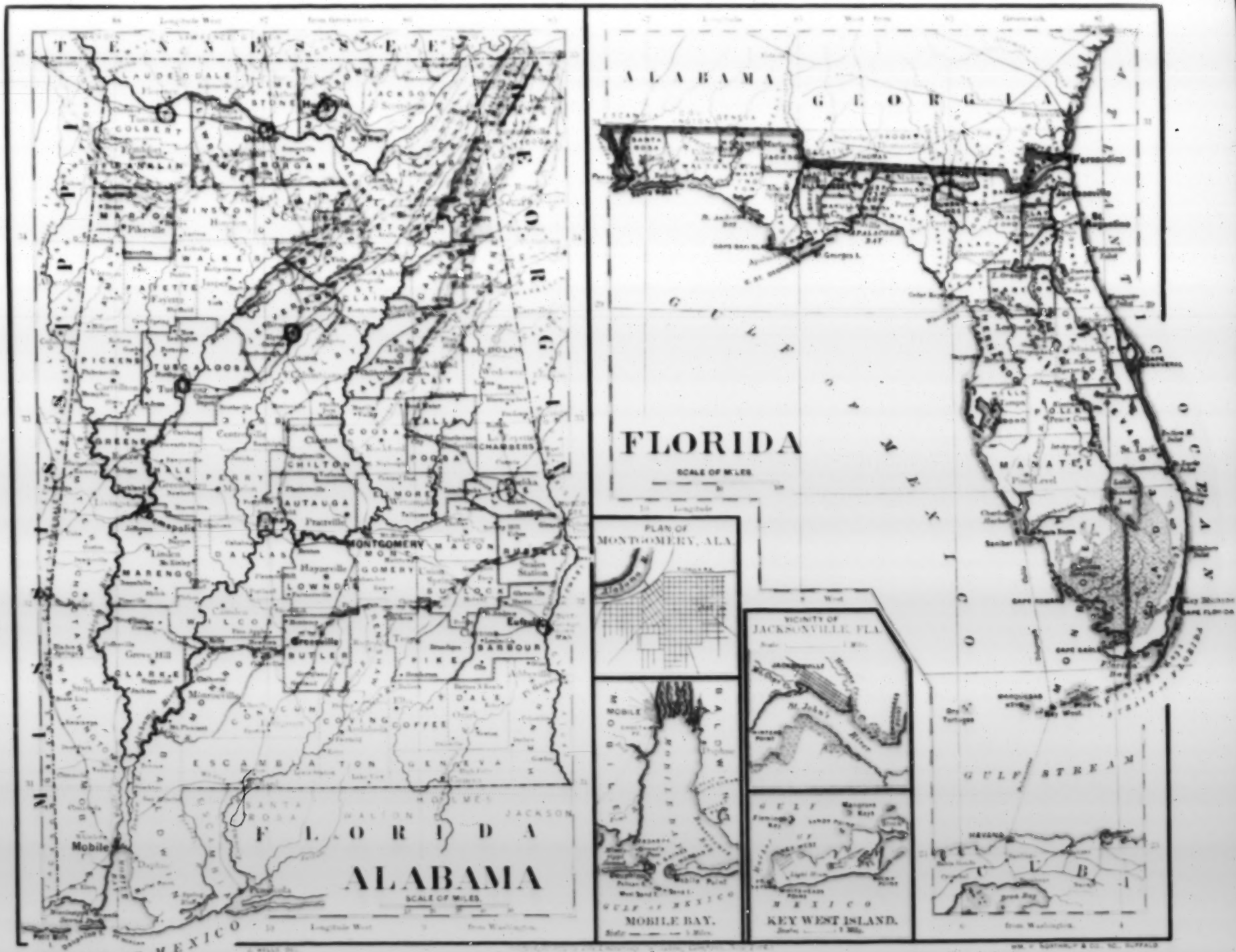
MAP STUDIES.

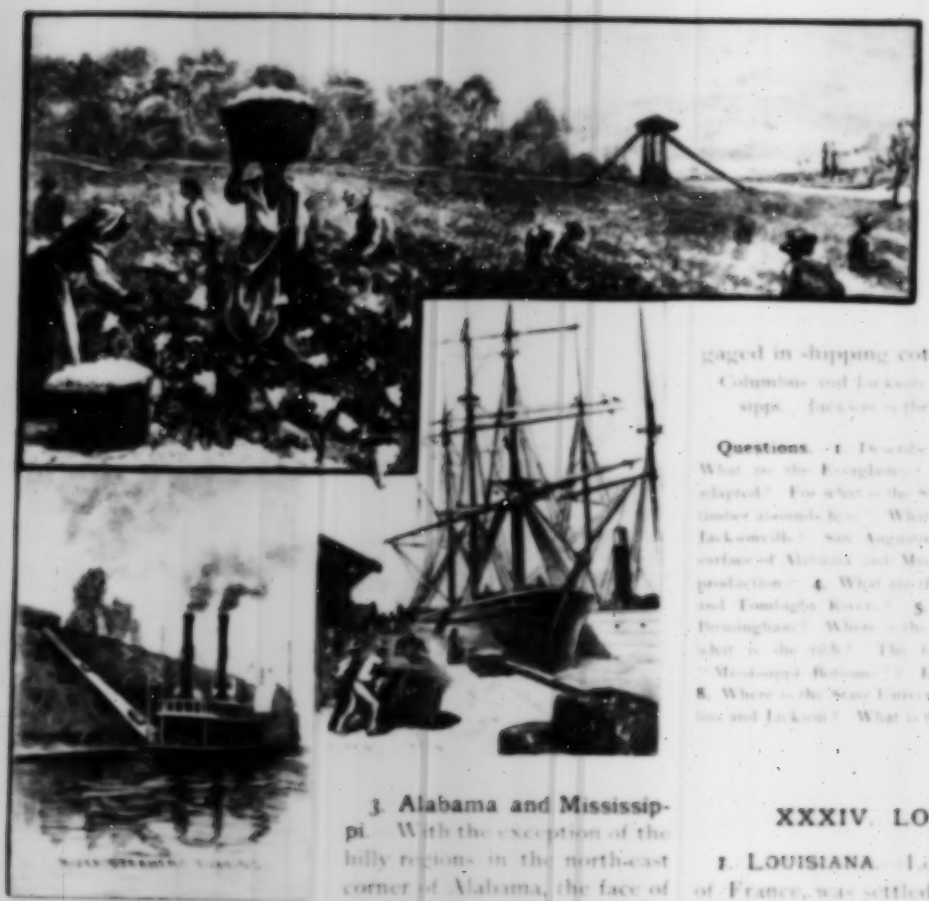
General Questions.—Between what parallels of latitude do these States lie? Which of these States is without mountains? Which borders on the Atlantic? Which is partly drained into the Mississippi? Which has the longest coast-line?

Florida.—Bound Florida. What natural division of land is this State? Describe the course of the St. John's River. What lakes does it drain? Describe the course of the Suwanee. What two rivers form the Apalachicola? Name the largest lake. What are the Everglades? Name the capes on the Atlantic coast. On the Gulf coast. What bays on the coast? Where are Florida Keys? Where is Key West? Dry Tortugas? What great ocean current between Florida and Cuba? What is the capital? Pensacola? Jacksonville? Fernandina? St. Augustine? Which is the most southern town in the United States? Etc. Key West.

Alabama.—What part of Alabama is mountainous? What range of mountains terminates in the northern part of the State? Etc. The Appalachian Mountains. Trace the ridge of cane-hills crossing the State. It is shown by a light mountain line reaching from Kowel to Choctaw County. What river does into Mobile Bay? What rivers form the Alabama? Describe the course of the Coosa. On the Alabama. On the Tombigby. Name the principal tributaries of the Tombigby. What large river does westwardly through the northern part of Alabama? What river does between Alabama and Georgia? What two have on the coast five small bays? What islands near the entrance of Mobile Bay? Where is Mobile? The capital? Selma? Demopolis? Decatur? Talladega? Huntsville? Tuscaloosa? Eufaula? Opelika? Birmingham? Greenville? Eutaw? Marion?

Routes of Travel.—In what waters would you sail in going from Pensacola to Key West? What great stream would you cross in going from Key West to Havana? What is the distance by sea of mile. How would you go by steam-boat from Mobile to Montgomery? Pensacola to Mobile?


TENNESSEE
ALABAMA
GEORGIA
FLORIDA
SCALE OF MILES
MONTGOMERY
Mobile
GULF OF MEXICO
PLAN OF MONTGOMERY, ALA
VICINITY OF JACKSONVILLE, FLA
MOBILE BAY.
KEY WEST ISLAND.
GULF STREAM
ATLANTIC OCEAN



3. Alabama and Mississippi. With the exception of the hilly regions in the north-east corner of Alabama, the face of the country in these two States is almost entirely level. Their latitude and climate are the same.

Cotton is the great staple. In its production these States excel most of the other Southern States.

4. Alabama. Alabama has rich deposits of coal and iron, and quarries of fine marble. It is largely engaged in manufacturing.

The Alabama and Tombigby Rivers, which are navigable by steamboats for several hundred miles, traverse the State from north to south. They furnish an outlet to the Gulf for the cotton of this section.

5. Mobile, the largest city, is one of the leading ports for the shipment of cotton.

Montgomery, the capital, situated in the midst of a rich agricultural section, is an important commercial city.

Selma and Tuscaloosa are thriving towns, and important points for the shipment of cotton. Birmingham is a growing manufacturing town, in the coal and iron district. The University of Alabama is at Tuscaloosa.

6. Mississippi.—Mississippi lacks mineral wealth, but is rich in cotton. Her forests are also valuable.

7. The Levees. The Mississippi River, for 150 miles in this State, is prevented from overflowing its banks and converting the lowlands into swamps, by embankments called levees.

By means of these levees a vast extent of remarkably fertile land, known as the "Mississippi Bottoms," has been reclaimed.

Before the levees were constructed, the area of lands in various parts of the Mississippi Valley subject to overflows was about 34 millions of acres; an area larger than the State of New York.

8. The University of Mississippi is at Oxford. Vicksburg, the largest city, and Natchez are situated on the bluffs of the Mississippi. They are extensively engaged in shipping cotton to New Orleans.

Columbus and Jackson are the principal places of trade for Central Mississippi. Jackson is the capital.

Questions.—1. Describe the surface of Florida. What is said of the lakes? What are the Everglades? Describe the climate. To what is the soil specially adapted? For what is the State famous? Name an important industry. What shipbuilding is done here? What are the Florida Keys? 2. What is said of Tallahassee? Jacksonville? St. Augustine? Key West? Pensacola? 3. What is said of the surface of Alabama and Mississippi? Of their climate? What is their great staple production? 4. What are the principal of Alabama? What is said of the Alabama and Tombigby Rivers? 5. Of Mobile? Montgomery? Selma and Tuscaloosa? Birmingham? Where is the State University? 6. What does Mississippi lack? In what is she rich? The forests? 7. What are the levees of the Mississippi? "Mississippi Bottoms"? How much land has been reclaimed by the use of levees? 8. Where is the State University? What is said of Vicksburg and Natchez? Columbus and Jackson? What is the capital?

XXXIV. LOUISIANA AND ARKANSAS.

1. Louisiana.—Louisiana, so called in honor of Louis XIV of France, was settled by Spanish and French colonists. The descendants of the latter are called French Creoles.

Louisiana was purchased from France in 1803, chiefly to secure a free outlet to the sea through the Mississippi.

MAP STUDIES.

General Questions.—In which of these States are there mountains? In which are lakes most numerous? Which has no sea-coast? Which border on the Gulf of Mexico? Which has the longest coast-line? What great river divides these States?

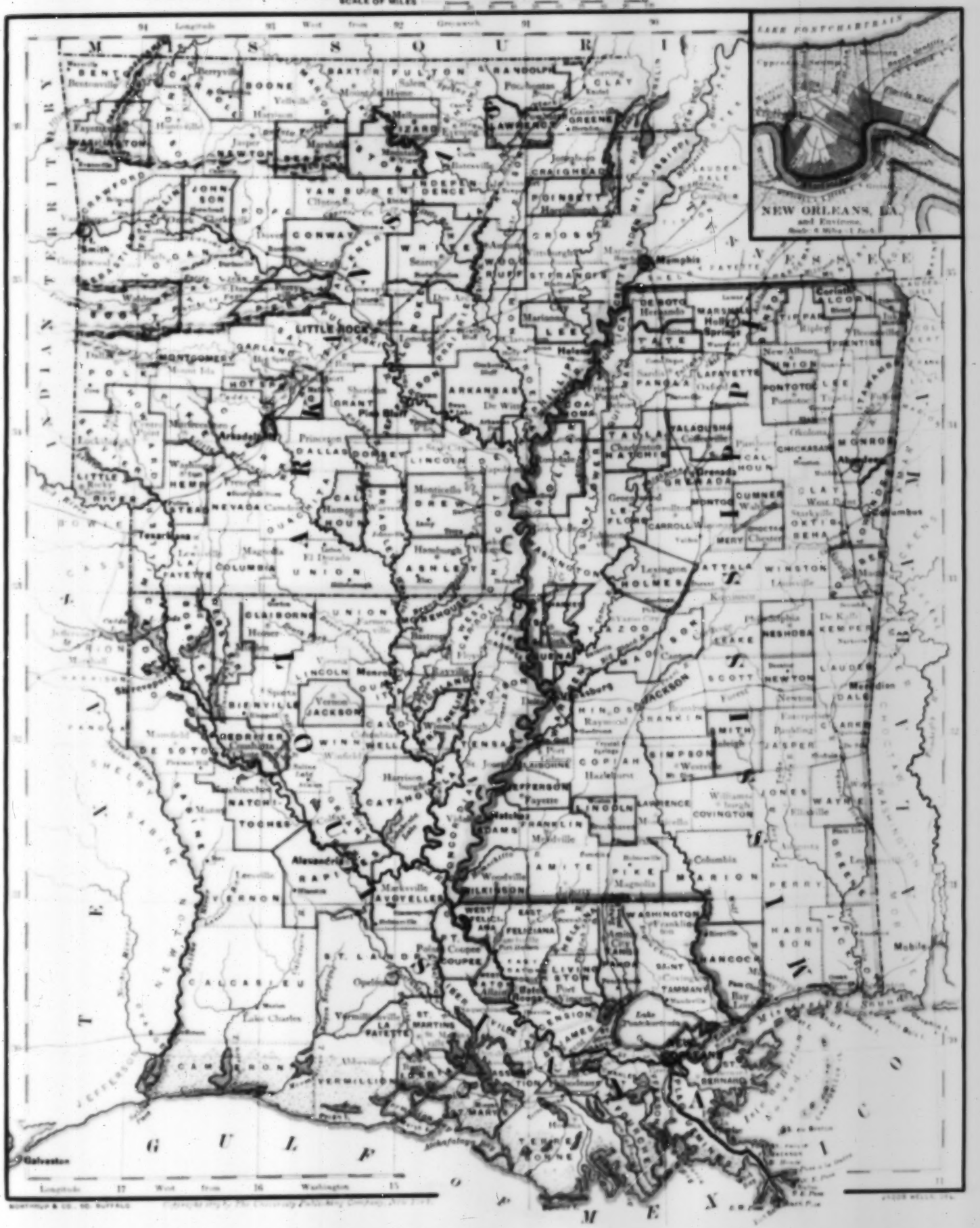
Mississippi.—What rivers form the western boundary of Mississippi? Name the principal rivers of Mississippi. What two rivers enter the Mississippi near Vicksburg? Where is Mississippi Sound? What rivers flow into Mississippi Sound? Name the islands that separate this sound from the gulf. What and where is the capital? Where is Vicksburg? Natchez? Columbus? Aberdeen? Meridian? Corinth? Grenada? Holly Springs? Port Gibson? Pass Christian?

Arkansas.—What portion of Arkansas is mountainous? What ridge and mountains cross the north-western corner of the State? What lakes in the north-east corner? What great river forms most of the eastern boundary? What large river crosses this State? What large river flows into both the Arkansas and Mississippi? What drains Lake St. Francis? Name the capital. Where is it? Where is Helena? Hot Springs? Texarkana? Arkadelphia? Fort Smith? Hopefield?

Louisiana.—What rivers separate Louisiana from Mississippi? What great tributary of the Mississippi flows across Louisiana? Into what river does the Washita flow? What river and lake separate Louisiana and Texas? Trace the Atchafalaya to its source. What river and bayou enter Grand Lake? Describe the course of Bayou La Fourche. Where is Lake Pontchartrain? Grand Lake? What lakes in the north-western part of the State? Name the bays on the coast. How many mouths has the Mississippi? Where is New Orleans? Baton Rouge? Shreveport? Alexandria? Monroe? Opelousas? Natchitoches? Franklin? Morgan City?

Routes of Travel.—On what bodies of water would a steamboat go from New Orleans to Little Rock? Shreveport to Vicksburg? New Orleans to Mobile?

ARKANSAS, MISSISSIPPI AND LOUISIANA.



2. The **depression of the land** is one of the marked physical features of this State. From the mouth of the Red River down to the Gulf of Mexico the level of the Mississippi River and its outlets — called bayous (*bi-ooz*) — is higher than that of the adjacent country.

NEW ORLEANS.

The drainage, therefore, is *from* and not *toward* the water courses. The people speak of going "*up* to the river," instead of "*down* to it." This depression exposes the country to fearful floods wherever a break occurs in the levee. Such a break is called a *crevasse*.

3. Louisiana produces nearly all the cane-sugar raised in the United States. It is one of the leading States in the production of rice and cotton.

The climate along the Gulf coast is semi-tropical, and many of the fruits and flowers of the torrid zone, such as the magnolia grandiflora, the orange, pomegranate, and fig flourish there.

The "Spanish moss" so extensively used in upholstery for cushions and mattresses, grows as an air-plant upon the forest trees of this region.

Large quantities of rock salt are obtained from an island situated in Vermilion Bay. Coal, iron, sulphur, and marl are also found in the State.

4. NEW ORLEANS, the capital of the State, exports more cotton than any other seaport in the world, and is the greatest sugar market in the United States.

At certain seasons of the year its levees are piled up with produce that has been sent from the "up-country" for exportation, and its shipping are lined for miles with steam-boats and other craft engaged in the carrying trade. It is about one hundred miles from the mouth of the Mississippi. Carrollton, a suburban portion of the city, is noted for its public gardens and beautiful residences. Shreveport is the chief centre of trade for North Louisiana. Baton Rouge is an important river town.

5. **ARKANSAS.** Arkansas has but few towns, and none of them are large, a proof that its industry is rural. The chief products are cotton and corn.

Eastern Arkansas consists of lowlands.

Before the system of leveeing the Mississippi was adopted, it was subject to serious overflows. The lands when drained are exceedingly productive.

The western part of the State is hilly. It is a fine grass country, and is devoted to stock-raising.

Among the mineral resources of Arkansas are quarries of the most valuable whetstones, and of the finest red granite.

The zinc mines rank next in value to those of New Jersey. Rich deposits of coal, iron, and lead are found.

Hot springs are celebrated for their medicinal qualities.

Little Rock, the capital and chief city, is the centre of trade. Helena and Fort Smith are important towns.

Questions. — 1. By whom was Louisiana settled? How acquired by the United States? 2. What is said of the depression of the land? What is a crevasse? 3. In what does Louisiana rank first among the States? What are her other great products? Where do we get our upholstery moss? What are the mineral resources? 4. How does New Orleans rank in the cotton and sugar trade? How far is it from the Gulf? What is said of Carrollton? Shreveport? Baton Rouge? 5. What shows the industry of Arkansas to be rural? What are its chief products? Describe Eastern Arkansas. — Western. What are the mineral resources? What is said of the hot springs? What is the chief centre of trade? What of Helena and Fort Smith?

XXXV. TEXAS AND INDIAN TERRITORY.

1. **TEXAS.** Texas is the largest State in the Union. It is thirty-five times the size of Massachusetts.

This State was formerly a part of Mexico, but separated from that country in 1837. In 1845 it was annexed to the United States.

MAP STUDIES.

Texas. — What territory bounds Texas on the north? What country on the southwest? What portion of Texas is mountainous? Where are the White Sand Hills? Guyot Mountains? Santa Ana Mountains? Where is Round Mountain? Mohrs Mountain? The Llano Estacado? Trace the ridge of sand hills extending across the State. (This ridge starts from a point in Eastern Texas near Texarkana.)

What river forms part of the eastern boundary? Part of the northern? What great river separates Texas from Mexico? What rivers flow into Galveston Bay (see small map)? Which is the largest? What great river enters the Gulf a little south of Galveston? Describe the course of the Brazos. Name its principal tributaries. What large river flows into Matagorda Bay? Describe its course. Name its chief tributaries.

What rivers enter into Sabine Lake? What two large and rocky? Espiritu Santo Bay? What river enters Corpus Christi Bay? What great tributary of the Rio Grande crosses the western part of the State? What lake in the northeast? What is the southeast corner? Name the bayous on the coast. The lagoons. What island and peninsula nearly inclose Galveston Bay (see small map)? Where is Laguna della Madre? Salt Lagoon?

What is the capital, and on what river? Where is Galveston? Houston? Dallas? San Antonio? Waco? Sherman? Jefferson? Denison? Fort Worth? Marshall? Indianola? Brownsville? Corpus Christi? Matagorda?

Routes of Travel. — How would you go by steamboat from Galveston to Austin? Houston to Galveston (see small map)? Galveston to Brownsville? Corpus Christi to Matagorda? Indianola to Galveston? Matamoras to Laredo? Jefferson to Denison?

TEXAS
GULF OF MEXICO
Galveston
LOUISIANA
INDIAN TERRITORY
NEW MEXICO
NORTH WESTERN TEXAS
PLAN OF AUSTIN
PLAN OF THE SITUATION OF HOUSTON & GALVESTON

Texas is famed for its beautiful prairies, its vast area of fertile lands, and the variety and abundance of its products. These include cotton, rice, and sugar, the olive and the vine, wheat, corn, and other grains.

Texas is the leading State in the Union in the production of cotton and in stock-raising. It is also a fine wool-growing country.

The cattle feed over an area of [illegible] square miles, and the wheat region is very great. Several hundred thousand cattle are annually driven across the plains to Kansas for Eastern markets.

This State abounds in coal, iron, copper, lead, and other useful minerals.

2. Galveston is the chief port and most populous city. It has one of the best harbors on the Gulf, and exports largely cotton, hides, and wool.

Houston is a flourishing shipping port, and the principal railroad and manufacturing centre of the State.

San Antonio is the oldest town in the State, and the most important business centre of Western Texas.

Austin, the capital, is beautifully situated on the Colorado. Dallas, in Northern Texas, and Jefferson, at the head of Red River navigation, are flourishing cities.

Brownsville has an important trade with Mexico.

3. INDIAN TERRITORY. In 1832 Congress set apart the Indian Territory, and gave it to various peaceable tribes of red men, to be occupied and governed forever in their own way.

The Cherokees, Chickasaws (*chick-a-saws*), Choctaws, Creeks and Seminoles are the most noted of these tribes. They till the soil, and have a government, schools, and churches.

Tahlequah (*tah-le-kwah*), the chief town, is in the Cherokee division. Some members of this tribe have elegantly furnished houses, are polished in manner and refined in taste. Some of their neighbors, however, after the fashion of their fathers, still scour the plains in search of game and adventure.

There are, in the Indian Territory, plains which abound in prairie-dogs, buffalo, wild deer, and other game.

Questions.—**1.** How does Texas rank in size among the States? What was it formerly? How was it acquired by the United States? For what is it famed? What are some of the products? In what does it take the lead? What of its wool? What is said of its cotton and wheat lands? Give its mineral resources. **2.** What is the most populous city? What of its harbor, its trade? What of Houston? San Antonio? Austin? Dallas and Jefferson? Brownsville? **3.** For what purpose was Indian Territory set apart by Congress? What Indians live here? How far are some of them civilized? What is said of the Cherokees? Name the capital.

CENTRAL STATES.

XXXVI. GENERAL DESCRIPTION.

States.	Area in Sq. Miles.	Population.	Capitals.	Chief Towns and their Population.	
Kentucky	37,680	1,321,011	Frankfort	Louisville	100,753
Ohio	39,964	2,665,260	Columbus	Cincinnati	216,239
Indiana	33,809	1,680,637	Indianapolis	Indianapolis	36,280
Illinois	55,405	2,539,891	Springfield	Chicago	298,977
Michigan	56,451	1,184,059	Lansing	Detroit	79,850
Wisconsin	53,924	1,054,670	Madison	Milwaukee	71,440
Missouri	65,350	1,721,295	Jefferson City	St. Louis	310,864
Iowa	55,045	1,194,020	Des Moines	Dubuque	18,434
Minnesota	83,531	439,706	St. Paul	St. Paul	20,031
Kansas	81,318	364,399	Topeka	Leavenworth	17,542
Nebraska	75,995	122,993	Lincoln	Omaha	16,083
Dakota (Ter.)		14,181	Yankton	Yankton	737

1. Position and Surface.—The Central States are all inland, and occupy nearly the whole of what is called the *Upper Mississippi Valley*.

So vast is the area of these States that there is room in them for a population of 300 millions.

The **surface** is generally level, or rolling, with a gentle inclination toward the Mississippi, which occupies the line of lowest level from north to south.

The only elevations are the hills of Michigan and Minnesota, and the short, low ranges of mountains in Southern Missouri and South-eastern Kentucky.

2. Prairies. The most striking feature of these States is their vast treeless prairies. In their natural state these are covered with grass, gay with flowers, and alive with herds of cattle. Their soil is entirely free from stones.

Nearly the whole of Indiana, Illinois, Wisconsin, and Iowa is a prairie country.

3. Rivers. — The Central States are drained by the Mississippi and its tributaries. From all of these States, excepting Michigan, streams flow into the Mississippi, which delivers the drainage into the Gulf of Mexico.

Situated between the two great water-sheds of the country, and draining an area of such vast extent, the Mississippi receives immense volumes of water. When its eastern tributaries are swollen by heavy rains at the same time that the tributaries from the west, owing to the melting of the snows upon the Rocky Mountains, are discharging unusually large quantities of water, the Mississippi receives two floods at once. It then sometimes overflows its banks and attains the proportions of a sea. In the spring flood of 1897, the Mississippi was estimated to be, at Memphis, more than 40 miles broad.

The eastern tributaries of the great river, as compared with the western, are more rapid and are not navigable to so great a distance.

This is because the Mississippi does not occupy the middle of the valley; it is *far to the east of the middle*, winding along, especially in Kentucky and Tennessee, not very far from the most western range of the Appalachians.

4. Climate. — These States have an *inland* climate. In the northern section the winters are long and severe, the summers are short and hot; in the southern the winters are milder, and the summers longer.

5. Minerals. — The Central States are rich in minerals. The coal-fields of Ohio, Indiana, Illinois, and Missouri are among the largest and the most bountifully stored in the world. They embrace an area of many thousand square miles.

Masses of native copper, tons in weight, have been quarried out of the mines in the Lake Superior copper region.

Iron is abundant on the borders of Lake Superior, and in Missouri there are mountains of iron.

Lead abounds in Illinois, Wisconsin, Iowa, and Missouri.

Salt and medicinal springs are found in Ohio, Kentucky, Michigan, and Missouri.

Michigan now produces nearly as much salt as New York.

6. Products and Pursuits. — The region occupied by the Central States is the granary of the country.

The leading productions are grain, potatoes, hay, and tobacco. Vegetables, hemp, grapes, and other fruits thrive abundantly. The soil and climate are also admirably adapted to the growth of sorghum, or Chinese sugar-cane.

The people of these States are extensively engaged in raising cattle, horses, sheep, and hogs. The annual wool-clip both in Ohio and in Michigan is very great.

Manufacturing and mining are also important and rapidly growing industries.

FISHERIES. — The fisheries of the Great Lakes are a profitable source of industry, especially in Michigan.

The white-fish of the lakes, when salted and packed, is highly esteemed as an article of food.

COMMERCE. — The commerce of the Central States consists chiefly in the export of agricultural and grazing products, copper, lead, iron, and lumber.

The commercial advantages of these States are unrivalled.

The Mississippi flows from north to south, and has navigable tributaries which connect it with nearly every State. This river gives to the people of the Central States a natural outlet to the sea for their produce. The Great Lakes are inland seas, which largely facilitate trade between the inhabitants of the adjoining States, besides furnishing important water routes to the Atlantic through the St. Lawrence and the canals.

A vast network of railroads covers this section, providing numerous additional highways for trade, and serving, with their eastern and southern connections, to transmit the merchandise of the Central States to the Atlantic seaboard.

The chief commercial cities are Chicago, St. Louis, Cincinnati, Indianapolis, Louisville, and Detroit.

Questions. — Name the Central States and their capitals. **1.** What do these States occupy? How large a population could they sustain? What is said of the surface? What elevations are found in the Central States? **2.** What is said of the prairies? Name four States lying in the prairie region. **3.** What rivers drain the Central States? What causes the floods of the Mississippi? Which are longer, the eastern or the western tributaries of the Mississippi? Why? **4.** Describe the climate. **5.** What is said of the coal-fields? Where does copper abound? Iron? Lead? Salt? **6.** What is the region occupied by these States called? What are the leading productions? Which States are noted for their wool? What is said of manufacturing and mining? What of the Michigan fisheries? In what does the commerce of the Central States consist? What natural advantages for commerce have these States? How are they connected with the Atlantic seaboard? Name some of the chief commercial cities.

XXXVII. KENTUCKY AND OHIO.

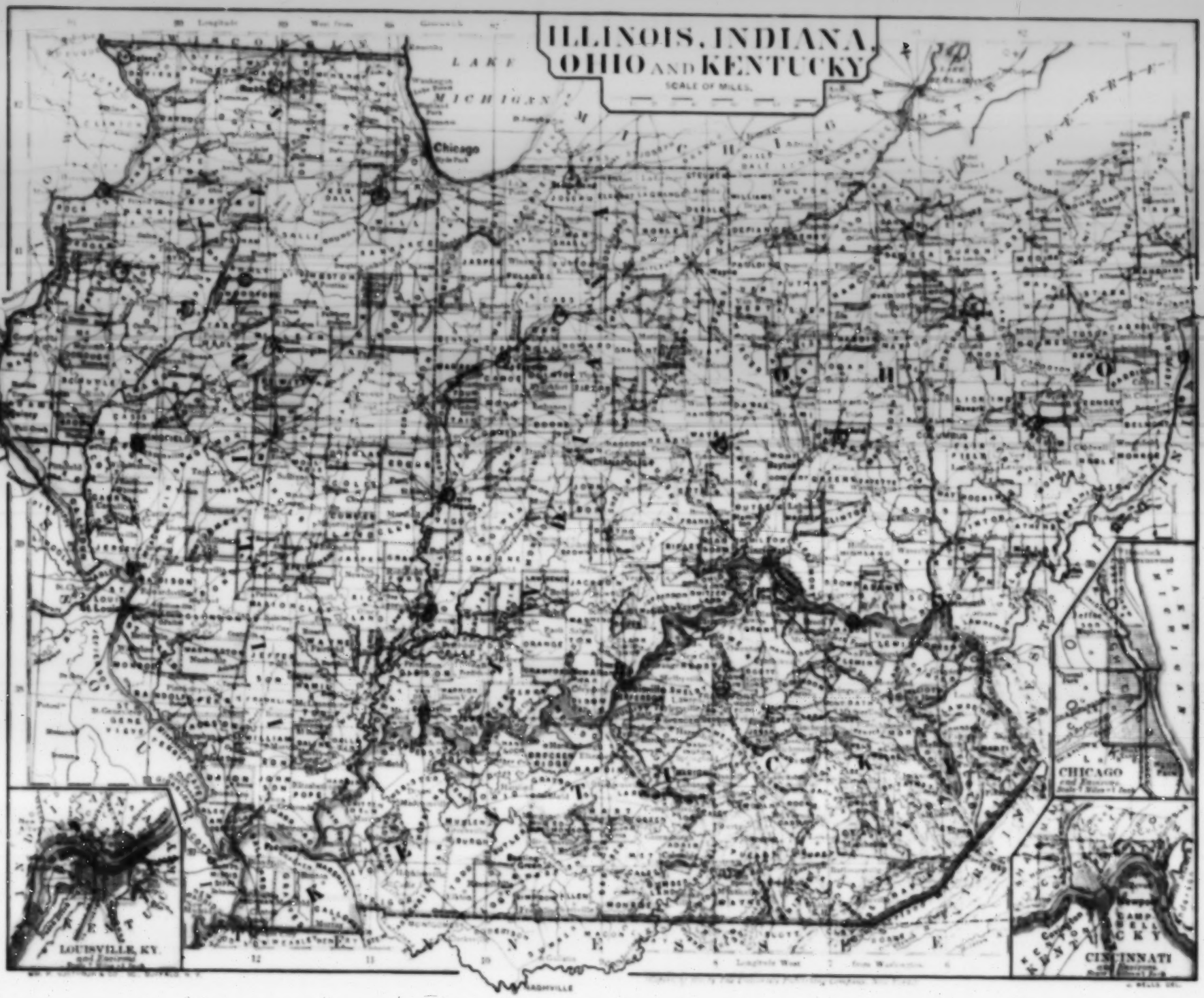
1. KENTUCKY. — Kentucky surpasses every other State in the production of tobacco and hemp. Corn and other grains are also leading staples.

The famous blue-grass region of this State is one of the finest grazing districts in the United States. Its breeds of horses and cattle are very celebrated.

Kentucky ranks with Pennsylvania in the extent and richness of its coal and iron mines.

MAMMOTH CAVE.

The **Mammoth Cave**, in the western part of the State, is one of the most remarkable caverns in the world. It extends underground for miles, but has never been thoroughly explored. It contains a navigable lake of fresh water. The roofs and walls of its chambers are covered with glistening stalactites.


ILLINOIS, INDIANA, OHIO AND KENTUCKY
SCALE OF MILES.
LAKE MICHIGAN
Chicago
LOUISVILLE, KY.
CHICAGO
CINCINNATI
NASHVILLE

MAP STUDIES.

The **early settlers** of Kentucky were cut off by the Alleghanies from the Atlantic seaboard. The river system of the State, however, enabled them to carry their produce to market. They floated it on rafts down the Ohio into the Mississippi, and so on to New Orleans. Here both raft and cargo were sold. All this, however, took a long time. Steam-boats and railways have effected a marvellous change.

2. Louisville is a great commercial centre, having a large trade in hemp, tobacco, flour, and pork.

It is at the Falls of the Ohio, to pass which a canal has been constructed capacious enough to admit the largest steamers that ply on the river.

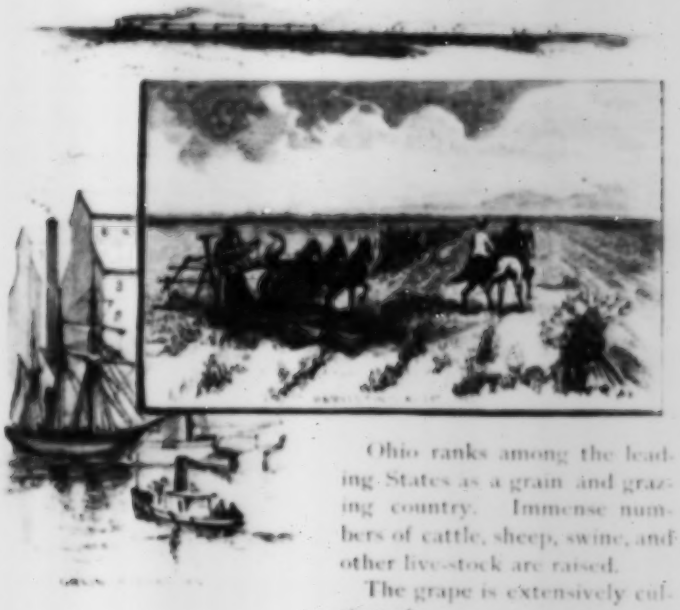
Lexington, in the midst of the blue-grass country, is a beautiful city. It is largely engaged in manufacturing, and is noted for its institutions of learning. Covington and Newport, opposite Cincinnati, are also manufacturing towns.

Frankfort is the capital of the State. Maysville, on the Ohio, is the leading hemp market in the country.

3. OHIO.—Ohio is the third State of the Union in population. It ranks second in the production of wool, coal, and iron.

The coal and iron mines are in the eastern part of the State.

The people are more largely engaged in mining and manufacturing than those of any other Central State.



Ohio ranks among the leading States as a grain and grazing country. Immense numbers of cattle, sheep, swine, and other live-stock are raised.

The grape is extensively cultivated.

One of the most noted of our native wines is the Catawba of Cincinnati.

The State has remarkable commercial advantages.

The Ohio River with its connections places it in communication with the marts of the Mississippi Valley. The Erie Canal and the railways of New York, Pennsylvania, and Maryland connect it with the Atlantic seaboard.

4. CINCINNATI is the largest city and the chief commercial and manufacturing centre of the Ohio Valley.

It is situated on the Ohio, which is here crossed by a fine suspension bridge. This city has extensive river and railway connections with the South, West, and East. Pork-packing is the industry for which it is most noted.

Cleveland, on Lake Erie, is a leading lake port, and one of the most beautiful cities in the Union. It is noted for ship-building and manufactures.

Columbus, the capital, is a flourishing manufacturing and commercial city.

Toledo, on Lake Erie, is an important grain mart.

Dayton, Sandusky, Zanesville, and Hamilton are thriving cities.

Questions.—1. In what does Kentucky surpass every other State? For what is the blue-grass region famed? What is said of the coal and iron mines? How did the early settlers get their crops to market? What change has taken place? What can you say of the Mammoth Cave? 2. Of Louisville? Lexington? Covington and Newport? Frankfort? What is the leading hemp market in the country? 3. How does Ohio rank in population? In producing wool? Coal? Iron? In what section are the mines? In what does Ohio surpass every other Central State? In what does it rank as a leading State? What native wine is produced here? How is Ohio connected with the marts of the Mississippi Valley and the Atlantic seaboard? 4. What is said of Cincinnati? For what industry is it most noted? What is said of Cleveland? Columbus? Toledo? Name other thriving cities.

MAP STUDIES.

General Questions.—In which of these states are mountains found? Which border on Lake Michigan? On Lake Erie? On the Ohio? On the Mississippi? What States are partly drained into the great lakes?

Kentucky.—What mountains separate Kentucky from Virginia? In what general direction does the surface of the State slope? How do you know this? What river forms the northern boundary? The north-eastern? The western? Name the principal tributaries of the Ohio flowing through Kentucky. What river enters the Ohio near Newport? Describe the Licking. The Kentucky. Describe the Green. What two rivers from Tennessee cross the western part of the State? Where does the Cumberland River rise? Where is Louisville? Lexington? Frankfort? Newport? Covington? Paducah? Maysville? Bowling Green? Dansville? Mammoth Cave?

Ohio.—Judging by the rivers, in what general directions does the surface of Ohio slope? What great river separates Ohio from West Virginia? Ohio from Kentucky? What lake forms part of the northern boundary? What are the principal rivers of this State that flow into the Ohio? Into what river does the Muskingum flow? What river west of the Muskingum? In what direction does the Maumee River flow? Into what does it flow? In what part of the State is the capital? Where is Cincinnati? Cleveland? Sandusky? Toledo? Hamilton? Zanesville? Portsmouth? Springfield? Marietta? Steubenville?

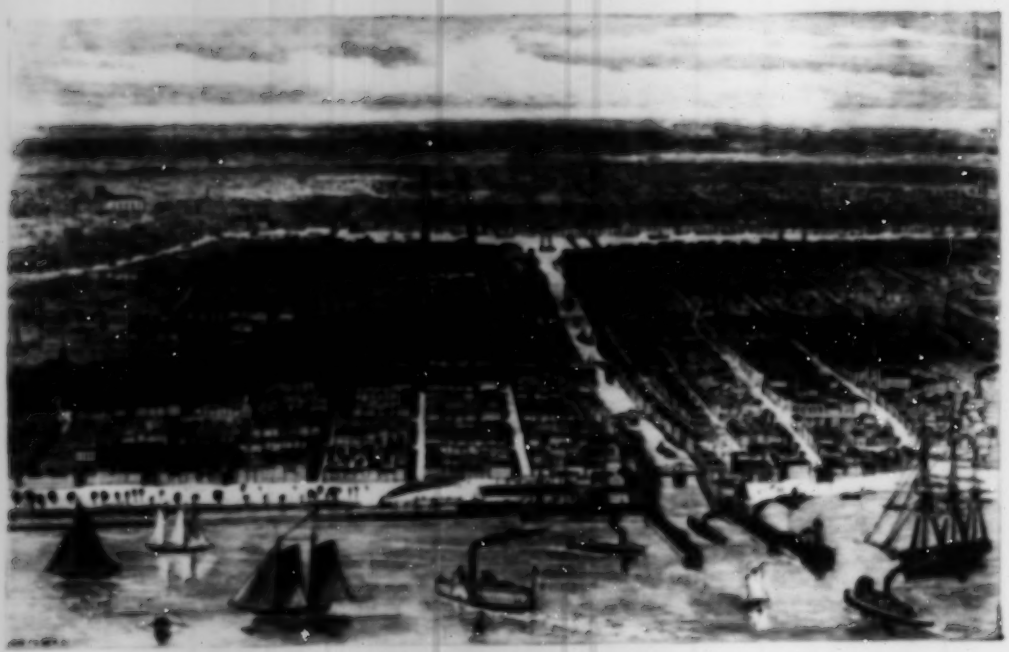
Indiana.—What great lake forms part of the northern boundary of Indiana? What river separates Indiana from Kentucky? What river forms part of the boundary between Indiana and Illinois? Name its principal tributaries. What are the branches of the White River? In what direction does the Wabash flow? What is the capital of the State, and where? How many railways centre in Indianapolis? Where is Fort Wayne? Terre Haute? La Fayette? Evansville? New Albany? Richmond? Logansport? Vincennes? South Bend?

Illinois.—What great river forms the western boundary of Illinois? What lake and river form parts of its eastern boundary? What river the southern? Into what does the Illinois River flow? Into what does Rock River flow? Where is Kaskaskia? The Sangamon? The Little Wabash? The Embarras? Where is Lake Peoria? Name the capital. In what part of the State is it? What great city on Lake Michigan? How many miles along the lake shore does Chicago occupy (see small map)? Where is Rock Island? Peoria? Quincy? Rockford? Jacksonville? Bloomington? Galena? Joliet? Galesburg? Alton? Cairo?

Routes of Travel.—On what body of water would you travel in going by steamboat from Cincinnati to Cairo? Cairo to Galena? Cleveland to Fort Wayne? Cincinnati to Wheeling, West Va.? Louisville to Nashville? Terre Haute to New Albany?

XXXVIII. INDIANA AND ILLINOIS.

1. Indiana and Illinois.—These States are in the Prairie region; they have no mountains; their streams, however, are bordered by bold, picturesque bluffs. Their latitude and climate, their productions and pursuits are the same.



CHICAGO.

2. **INDIANA.**—Indiana is the sixth State of the Union in population, and one of the leading Central States in agriculture and stock-raising.

Rich coal-fields are found near its southern borders.

The Wyandot Cave in this State rivals the Mammoth Cave in extent and grandeur.

3. Indianapolis, the capital, is the largest and the most important commercial and manufacturing city in the State. It is a great railroad centre.

Evansville, on the Ohio, is a large grain and pork market.

New Albany is engaged in boat-building. Many of the steamers that ply on the Mississippi are launched here. A magnificent bridge connects New Albany with Louisville.

Terre Haute, Fort Wayne, Lafayette, Logansport, and Richmond are populous towns and important railroad centres.

4. **ILLINOIS.**—Illinois is one of the most populous of the Central States.

In the production of corn and oats it is the first State in the Union; it is one of the first in stock-raising, and ranks next to Ohio in manufacturing.

The lead-bearing region and the coal-fields of Illinois are among the richest and most extensive in the country.

5. CHICAGO is the most important commercial centre on the Great Lakes. It is the greatest grain market in the world, with the exception of London, and is also remarkable for its pork, live-stock, and lumber trade.

It receives a large proportion of the produce of the Central States, and transmits it to eastern and even foreign markets. On the other hand, it receives eastern and foreign goods, and distributes them throughout the entire North-west. Railways and water routes connect it with every part of the country, and vessels even sail hence direct to Liverpool.

Springfield, the capital, is in the midst of a productive country, and the centre of an active trade.

Quincy is situated on the bluffs of the Mississippi. It has an extensive river trade, and is largely engaged in manufacturing.

Galena is in the midst of the lead-mining region.

Peoria, on the Illinois River, is the principal market for Central Illinois. Rockford, Bloomington, Aurora, Galesburg, and Jacksonville are important towns.

Questions.—1. In what region do Indiana and Illinois lie? Describe their surface. How are they alike? 2. How does Indiana rank in population? In agriculture and stock-raising? What is said of its coal-fields? Of the Wyandot Cave? 3. Describe Indianapolis, Evansville, New Albany. Mention other important towns. 4. How does Illinois rank in population? In what does it surpass all other States? Is it largely engaged in stock-raising? What is its rank in manufacturing? What is said of its mineral resources? 5. How does Chicago rank among the commercial cities of the Lakes? As a grain market? For what other branches of trade is it remarkable? What does it receive, transmit, and distribute? Do vessels go direct from Chicago to Liverpool? What is said of Springfield? Quincy? Galena? Peoria? Rockford? Name other important towns.

XXXIX. MICHIGAN, WISCONSIN, AND MINNESOTA.

1. **MICHIGAN.**—Michigan is divided into two peninsulas. It is nearly surrounded by the Great Lakes; hence its climate is milder than that of any other inland State in the same latitude.

MAP STUDIES.

General Questions.—What great lake forms part of the northern boundary of two of these States? What large lake is nearly surrounded by two of them? Which States are these? What States border on Lake Superior? On the Mississippi? Which State has the greatest lake frontage? Which the least? Which State has the greatest number of lakes? How are Lakes Superior and Huron connected? Lakes Michigan and Huron? What rivers and lake connect Lake Huron and Lake Erie?

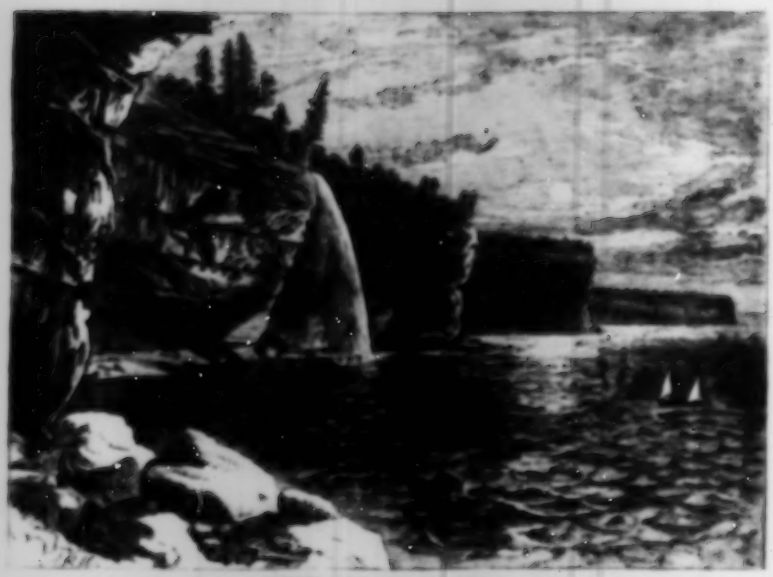
Michigan.—By what is Michigan divided into two peninsulas? What portion of the State is mountainous? What natural boundary has the northern peninsula on the north? South? What lake bounds the southern peninsula on the west? What three lakes on the east? What two bays on the east coast? What bays on the northern peninsula? What point north of Keweenaw Bay? Where is Green Bay? Lake Royale? What river flows into Saginaw Bay? Name the capital. Where is Lansing? Detroit? Grand Rapids? Kalamazoo? Jackson? Ann Arbor? East Saginaw? Marquette?

Wisconsin.—Trace the Wisconsin River. The Chippewa. What river forms part of the north-eastern boundary and flows into Green Bay? In what direction does Fox River flow? What does it enter? What lake does it drain? Where is Madison? Watertown? Janesville? Milwaukee? Oshkosh? Racine? Kenosha? La Crosse?

Minnesota.—What ridge crosses the northern part of this State? What lakes and river form a part of the northern boundary of the State? What lake and rivers, the eastern? What river separates Minnesota from Dakota? On what lake is the Red River the outlet? In what direction does it flow? What lake nearly touches Lake Traverse? How do the waters of Big Stone Lake reach the sea? Trace the Minnesota. Where does the Mississippi rise? What lakes does it drain? What is the capital? Where is St. Paul? Minneapolis? Winona? Red Wing? Duluth?

Routes of Travel.—How would you go by water from Chicago to Detroit? Milwaukee to Duluth? Milwaukee to Port du Lac? Lake Royale to Lake Erie?

MINNESOTA
WISCONSIN
AND
MICHIGAN
SCALE OF MILES
MANITOBA
LAKE SUPERIOR
LAKE MICHIGAN
ILLINOIS
INDIANA
OHIO
VICINITY OF ST. PAUL
VICINITY OF DETROIT
VICINITY OF MILWAUKEE



PICTURED ROCKS OF LAKE SUPERIOR.

The Pictured Rocks of Lake Superior are often visited. They are of various colors, as if they had been painted.

This State has great mineral wealth.

The Northern Peninsula abounds in iron; its copper mines on the shores of Lake Superior are the richest in the world.

The Southern Peninsula contains large deposits of coal and gypsum. Its salt-works in the Saginaw Valley are second only to those of New York.

Michigan is also a rich agricultural country.

The western shore of the Southern Peninsula, on account of its mild climate, is one of our greatest fruit regions.

Much of the State is heavily timbered, and the lumber trade is very valuable.

The lake shore of Michigan is more than 1,000 miles in length, and greater than the sea-coast of any State in the Union, except Florida. It has thus great commercial advantages.

2. Detroit is the largest city, and one of the most important lake ports. It is the chief commercial and manufacturing centre of the State.

Grand Rapids, the second city, is extensively engaged in manufacturing and in the lumber trade. Ann Arbor is the seat of the University of Michigan. Lansing is the capital.

3. WISCONSIN. Wisconsin consists mainly of rolling prairies.

The west winds of winter sweep across this State from the land and are cold. Passing over the lake to the Michigan shore they become warmer. Hence, though in the same latitude, Wisconsin is colder than Michigan.

Wisconsin has rich deposits of copper, lead, iron and zinc, and beautiful varieties of marble.

In agricultural resources it resembles Michigan. Wheat and lumber are the leading products.

The Fox River connects Lakes Winnebago and Michigan. From Lake Winnebago it is not far to the Wisconsin River, which flows into the Mississippi. The Indian voyagers used to pass this way from the Great Lakes to the Mississippi. Over the distance between Lake Winnebago and the Wisconsin they carried their canoes. Hence this part of their route was called the portage (from the French, *porter*, to carry). The portage was near the place where now stands the city of Portage. A canal now unites the Fox and Wisconsin.

4. Madison, the capital, is beautifully situated in the midst of a cluster of lakes.

Milwaukee is the principal commercial centre of the State, and one of the five great lake ports. It ranks next to Chicago as a grain market.

Racine contains the largest manufactory of threshing-machines in the world. Fond du Lac and Oshkosh, on Lake Winnebago, are thriving and important places. Oshkosh contains the largest match-factory in the world.

5. The Great Lakes border chiefly on the Central States, and separate them from the Dominion of Canada.

They are situated upon three terraces, one above the other, so that in going from the sea to Lake Superior, we ascend by three steps.

The first step lands us on the Lake Ontario terrace; the second above the Falls of Niagara, on a level with the three middle lakes — Huron, Michigan, and Erie; the third step lands us above Sault Ste. Marie, on a level with Lake Superior, at least 600 feet higher than the sea.

To enable vessels to descend from Lake Superior to the level of the St. Lawrence and the ocean, canals have been constructed around the Falls of Sault Ste. Marie and Niagara. The Welland Canal, which passes round the Falls of Niagara, forms a part of the route through which vessels trading between Chicago and Liverpool find their way.

The **commerce** on the lakes is very great; it is chiefly domestic, but it far exceeds in value the whole foreign trade of the country. It gives employment to not less than five thousand vessels of various kinds.

6. MINNESOTA. — Minnesota is crossed by the ridge, or "Height of Land," which separates the Valley of the Mississippi from the northern slope of the Great Central Plain.

On this elevation, 1,600 feet above the sea, both the Mississippi and the Red River of the North take their rise, the one flowing south and the other north.

The crest of the "Height of Land" is crowned with lakes of clear water. Lake Itasca, one of these, is the source of the Mississippi.

The Falls of St. Anthony and of Minnehaha, on the upper Mississippi, are noted for their beautiful scenery and immense water-power.

SCENE ON THE MISSISSIPPI RIVER.

The summers of Minnesota are delightful; the winters are severe, but uniform.

Minnesota is one of the leading States in the production of wheat.

The forests abound in fine timber, and lumbering is a great industry all along the Upper Mississippi and its tributaries.

Immense rafts of timber, on which the raftsmen build huts, are floated down to the river markets, even as far as New Orleans.

7. St. Paul, the capital and largest city, is at the head of navigation on the Mississippi.

Minneapolis, at the Falls of St. Anthony, produces vast quantities of lumber and flour.

Winona and Stillwater are largely engaged in the lumber trade.

Questions. — 1. How is Michigan divided? What gives it a mild climate? What are the mineral resources of the Northern Peninsula? The Southern? How does Michigan rank in the production of salt? How does Southern Michigan rank as a fruit region? What is said of the forest wealth of this State? Of her lake shore? What is its value? 2. What is said of Detroit? Of Grand Rapids? Of Ann Arbor? Lansing? 3. What is said of the surface of Wisconsin? How does its climate compare with that of Michigan? What is said of the mineral resources? In what does it resemble Michigan? What are the leading products? How did the Indian trappers formerly go from the Great Lakes through this State to the Mississippi? 4. What is said of Madison? Milwaukee? Its rank as a grain market? What is said of Racine? Fond du Lac? Oshkosh? 5. Upon what three terraces do the Great Lakes lie? How much is the Lake Superior terrace above the sea-level? How may vessels descend from this height to the St. Lawrence? What is said of the commerce of the Great Lakes? 6. What elevation does Minnesota contain? What rivers rise upon the Height of Land? In what direction do they flow? What of the lakes of Minnesota? Its water-falls? Its climate? How does it rank as a wheat-growing State? What is said of the forests and lumber trade of this State? 7. What is said of St. Paul? Minneapolis? Winona? Stillwater?

XL. MISSOURI, IOWA, KANSAS, NEBRASKA, AND DAKOTA.

1. **Missouri and Iowa.**—The climate, soil, and productions of Missouri and Iowa correspond to those of Kentucky, Ohio, and Illinois.

2. **Missouri.**—Missouri, north of the Missouri and Osage rivers, is a rolling prairie country. South of these rivers, it is hilly and rugged.

The mineral resources of this State are unsurpassed. Its coal beds are among the richest in the world. It contains one of the great lead-yielding regions in the United States. Pilot Knob and Iron Mountain are masses of iron ore.

The leading agricultural products are grain, hemp, and tobacco. Vineyards abound, as in Ohio. The wines are excellent.

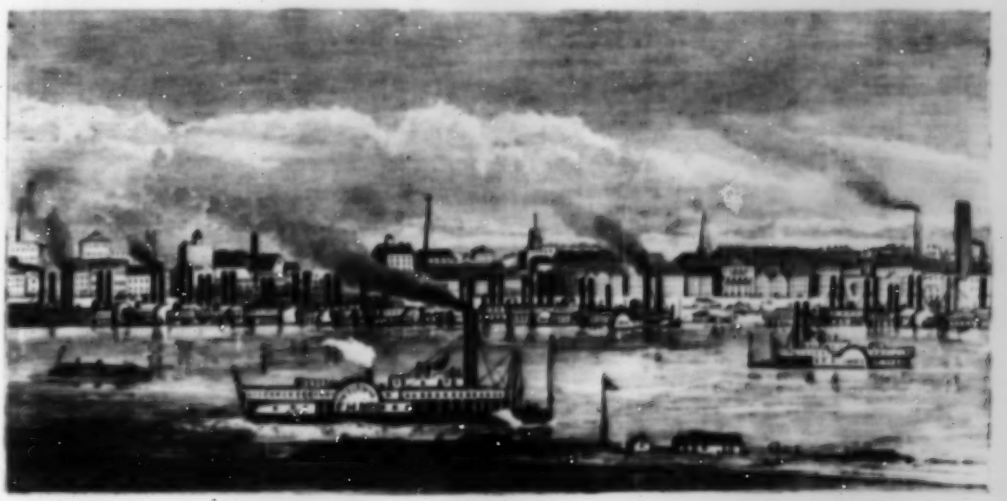
3. St. Louis, as its name implies, was first settled by the French. It is one of our largest inland cities, and, by reason of its geographical situation, is the commercial centre of the Mississippi Valley.

Situated near the meeting of two great rivers, and surrounded by a region embracing thousands of square miles of the most fertile lands, it is the focus of a vast and expanding trade.

It lies, moreover, midway between the Atlantic and Pacific Oceans, and is connected by numerous lines of railway with the ports of the Pacific, the Atlantic, and the Gulf.

Manufactures are extensively carried on. Flour, iron, and machinery are the leading articles produced.

Kansas City, on the Missouri River, is an important railroad and commercial centre. It has extensive iron-works and beef-packing establishments. St. Joseph is a thriving city, and the chief centre of trade for North-western Missouri.



ST. LOUIS.

Hannibal, St. Charles, and Springfield are important towns. Jefferson City, the capital, is a beautiful town on the Missouri.

4. **Iowa.**—Iowa consists mainly of rolling prairies.

Its coal beds and deposits of lead are extensive and valuable.

The lead mines of Dubuque have yielded 6,000,000 lbs. in a single year.

Iowa ranks among the leading States as a grain and grazing region. Its manufactures are flour, lumber, woollen goods, and paper.

5. Davenport, on the Mississippi, is the largest and most important city. Dubuque, also on the Mississippi, is the centre of a growing business, and an important lead market.

Burlington, Keokuk, and Council Bluffs are flourishing centres of trade. Des Moines, the capital, is in the midst of a rich coal and timber section.

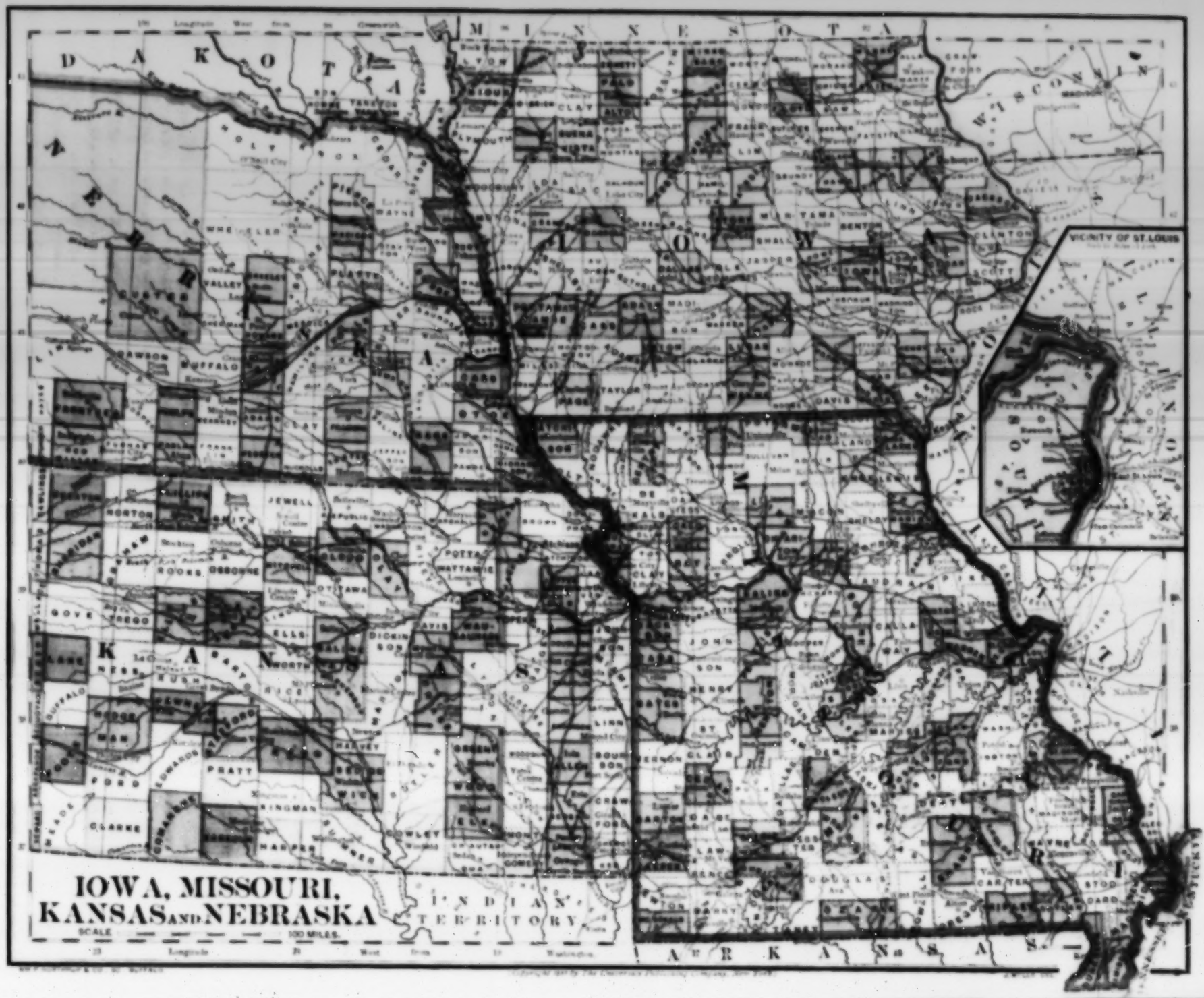
6. **Kansas and Nebraska.**—The eastern portions of these States consist of rolling prairies and grassy plains.

The western parts contain grazing lands of immense area.

7. **Kansas.**—The climate of Kansas is mild. The winters are neither long nor severe. The soil is exceedingly fertile. The leading productions are wheat and corn.

Kansas is a fine grazing country.

The grass of the plains dries into hay without being cut, serving to feed vast herds of cattle, which need no winter housing.


IOWA, MISSOURI, KANSAS AND NEBRASKA
INDIAN TERRITORY
VICINITY OF ST. LOUIS
DAKOTA
MINNESOTA
WISCONSIN
ILLINOIS
KANSAS
ARKANSAS

MAP STUDIES.

HARVESTING WHEAT IN DAKOTA.

Gypsum and coal abound in the State.

Eastern Kansas has been rapidly settled. Its population is steadily increasing.

8. Leavenworth is the most important city. Lawrence and Atchison are thriving towns. Topeka is the capital.

9. NEBRASKA.—The eastern portion of this State is a very rich agricultural region; the western part is well adapted to grazing. The climate is dry and healthful.

Grain, hemp, flax, and tobacco flourish. Although one of the youngest States, it is already one of the foremost in the production of wheat and corn, and in stock-raising.

The Platte sometimes presents the singular spectacle of a river in flow near its source and its mouth, but without any continuous stream in the intervening portion of its bed. Its head waters are fed by the snows. Lower down in the valley the rains and tributaries keep up the current; but in the middle portion of its course the water is sometimes absorbed by the earth, and the channel becomes quite dry.

10.—Omaha is a flourishing and growing city. Nebraska City is an important town. Lincoln is the Capital.

11. DAKOTA.—Dakota is watered by the Upper Missouri and its tributaries, and by the Red River of the North. The valleys of these rivers are very fertile. Like its neighbor Minnesota, Dakota is a fine wheat country.

The Black Hills of this Territory contain rich deposits of gold and silver.

Dakota is traversed by the Northern Pacific Railway, and is being rapidly settled.

Fargo and Bismark are growing towns. Yankton is the capital.

Questions.—**1.** What States do Missouri and Iowa resemble? **2.** What is said of the surface of Missouri? What is said of its coal beds? Its lead? Its iron mountains? What are its leading agricultural products? **3.** How does St. Louis rank among the cities of the United States? Describe its situation. What are its manufactures? What is said of Kansas City? St. Joseph? Hannibal? St. Charles? Springfield? Jefferson City? **4.** Describe the surface of Iowa. What is said of its minerals? In what is Iowa a leading State? What does it manufacture? **5.** What is said of Davenport? Dubuque? Burlington? Keokuk? Council Bluffs? Des Moines? **6.** Describe the Eastern parts of Kansas and Nebraska. The Western. **7.** What of the climate of Kansas? Its soil? Leading productions? What makes Kansas a fine grazing country? What are its minerals? Which part of Kansas is the most populous? **8.** What is said of Leavenworth? Lawrence and Atchison? Topeka? **9.** What is said of Eastern Nebraska? Western? The climate? Agricultural productions? In what is Nebraska one of the foremost States? Describe the Platte. **10.** What is said of Omaha? Nebraska City? Lincoln? **11.** How does Dakota resemble Minnesota? What is said of its minerals? What is said of Fargo? Bismark? Yankton?

MAP STUDIES.

General Questions.—Which of these States is mountainous? Which border on the Mississippi? On the Missouri? What river partly bounds them all? Does the Missouri flow into the Mississippi above or below the mouth of the Ohio?

Iowa.—What river separates Iowa from Wisconsin and Illinois? Iowa from Dakota? From Nebraska? What river crosses Iowa? Where is Coon river? In what direction do the tributaries of the Mississippi in this State flow? What are the chief branches of the Missouri in Iowa? What lake on the northern boundary? What is the capital and where? Where is Dubuque? Davenport? Keokuk? Burlington? Council Bluffs? Sioux City? Iowa City?

Missouri.—What mountains in Southern Missouri? Where is Iron Mountain? Pilot Knob? What river forms the eastern boundary of Missouri? What great river forms part of the western boundary and crosses the State? In what direction does it flow? Where does the Osage enter the Missouri? The Chariton? The Grand? What river enters the Missouri at Kansas City? In St. Louis above or below the mouth of the Missouri? What is the capital? Where is St. Joseph? Kansas City? Hannibal? St. Charles? Springfield? Nodaway? Cape Girardeau?

Kansas.—Into what does the Kansas River flow? What river traverses the south-western part of the State? What great river forms part of the north-eastern boundary? What is the capital? Where is Atchison? Leavenworth? Lawrence?

Nebraska.—What river forms the eastern boundary of Nebraska? What three rivers form part of the northern boundary? What river crosses the State? In what part of the State are most of the towns? What and where is the capital? Omaha? Nebraska City? Columbus? Fremont?

Routes of Travel.—How would you go by steam-boat from St. Louis to Nebraska City? From Dubuque to Cairo?

ROCKY MOUNTAIN AND PACIFIC STATES AND TERRITORIES.

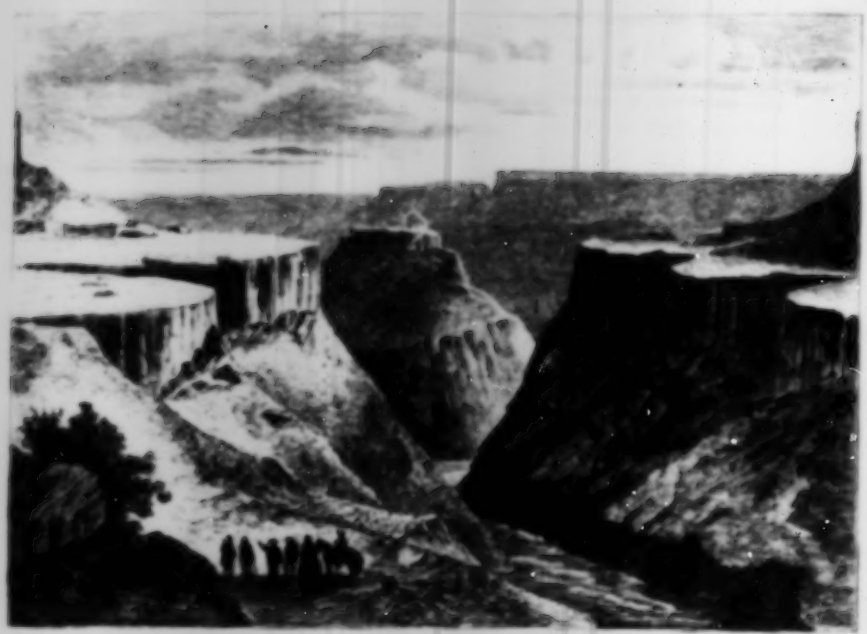
This section comprises three divisions: the ROCKY MOUNTAIN region on the east; the PLATEAU region in the centre; and the COAST region.

States or Territories.	Area in Sq. Miles.	Population, 1870.	Capitals.	Chief Cities and their Populations.	
Rocky Mountain Region.					
New Mexico (Ter.)	121,201	91,874	Santa Fé	Santa Fé	6,691
Colorado	104,500	39,864	Denver	Denver	4,759
Wyoming (Ter.)	97,833	9,118	Cheyenne	Cheyenne	1,450
Montana (Ter.)	143,776	20,595	Helena	Helena	3,000
Plateau Region.					
Nevada	112,090	42,491	Carson City	Virginia City	7,048
Arizona (Ter.)	113,916	9,658	Prescott	Tucson	3,224
Utah (Ter.)	84,476	86,786	Salt Lake City	Salt Lake City	12,854
Idaho (Ter.)	86,294	14,999	Boise City	Boise City	998
Coast Region.					
California	155,980	560,247	Sacramento	San Francisco	149,473
Oregon	95,274	90,923	Salem	Portland	8,293
Washington (Ter.)	69,994	23,955	Olympia	Olympia	1,203
Alaska (Ter.) (est.)	577,390	5,000		Sitka	2,000

XLI. ROCKY MOUNTAIN REGION.

1. This region embraces the State of Colorado and the Territories of New Mexico, Wyoming, and Montana.

2. **Surface.**—It is the most mountainous portion of the country. It extends on both sides of the Rocky Mountains, and includes the most elevated portions of the "Great Plains" which stretch along the eastern base of the mountains.



3. **Rivers.**—Here all the great rivers which flow westwardly into the Mississippi, as well as the largest streams which enter the Pacific, have their sources.

The most important are the Missouri, the Yellowstone, the Platte, and the Arkansas on the east, and the Columbia and Colorado on the west.

On the peaks and in the gorges of the mountains are lodged immense quantities of snow. The melting of this snow in warm weather feeds the rivers on either slope, and prevents them from running dry in summer.

4. **Irrigation.**—Descending from a great elevation, the waters of the rivers are readily applied to the purposes of artificial irrigation.

This is necessary throughout the region of the Great Plains, owing to the very scanty rainfall. Channels are cut from the rivers to the fields, which are flooded from three to five times during the growth of the crop.

5. **Climate.**—The climate is remarkably dry and bracing.

6. **Resources.**—This region possesses untold mineral wealth. The "Great Plains" are destined to be the chief grazing district of the continent.

In summer they are covered with grass, which, as winter approaches, becomes "self-made hay."

7. **New Mexico.**—New Mexico was formerly a part of Mexico, and was settled by emigrants from that country. Spanish is still the language most commonly used.

The country abounds in grand and imposing scenery. It is often as dreary and wild as naked rocks and barren wastes can make it; but, wherever there is water, the soil is exceedingly fertile.

Corn and wheat do well. Melons attain an enormous size, and are of excellent flavor.

8. Santa Fé, the capital and largest town, is nearly 7,000 feet

MAP STUDIES.

General Questions.—What great mountain range traverses this section on the east? What two on the west? What State and Territories are crossed by the Rocky Mountains? What State and Territories are crossed by the Cascade Mountains? What State by the Sierra Nevada? In what mountain system do the Green, White, and other tributaries of the Colorado rise? In what direction does this river flow? Into what? What State and Territory are separated by the Columbia? Into what does this river flow? Through what range does it break?

New Mexico.—What rivers traverse New Mexico? In what direction do they generally run? What is the capital? Where is Las Vegas?

Colorado.—Where is Pike's Peak? Where is North Park? Middle? South? San Luis? In what direction do the North and South Platte flow? The Arkansas? Rio Grande? Grand? What do you conclude, then, about the mountains in Colorado? What is the capital? Where is Leadville? Colorado Springs? Gunnison?

Wyoming.—Where are the Wind River Mountains? The Sweet Water? Big Horn? Black Hills? Where is Fremont's Peak? The Yellowstone Park? What rivers rise in this park? What lake in it? What and where is the capital?

Montana.—What range separates Montana from Idaho? What two lakes in the north-western part of the State? What river breaks through the eastern range of the Rocky Mountains in this State? What river flows westerly into the Columbia? What Indian tribe in Montana? What and where is the capital?

Nevada.—What is the longest river in Nevada? Into what lake does it flow? Where are two desert regions in this State? What is the capital? Where is Colville?

Arizona.—What river forms the western boundary of Arizona? What river in the south? Judging from the flow of the rivers, in what direction does Arizona slope? What and where is the capital? Where is the Grand Cañon of Colorado?

Utah.—What two mountain ranges in Utah? What great lake? What lake south of Great Salt? Where is the Green River? The Grand? Into what do they flow? Where is Salt Lake City?

Idaho.—What mountains form the north-eastern boundary of Idaho? What river forms part of the western? What river crosses the southern part of the Territory? Where is the Salmon River? What is the capital?

California.—What range of mountains near the coast? What range to the east of the coast range? Where is Mount Shasta? Mt. Whitney? Mt. San Bernardino? What river forms part of the eastern boundary? What two rivers drain the valley of California? In what direction does the San Joaquin flow? The Sacramento? Where do these unite? Into what do they flow? What point on the coast? What is the name of the entrance to San Francisco harbor? What and where is the capital? Where is Sacramento City? Los Angeles? San Diego? Santa Barbara? Stockton? Oakland?

Oregon.—What mountain range crosses the State? On which side of the Cascade range does most of the State lie? What river forms part of the northern boundary? What one forms part of the eastern? Which breaks through the Cascade Mountains? Which flows north into the Columbia? On which side of the Cascade range are most of the towns? Where is Mt. Hood? Mt. Jefferson? Mt. Pitt? What is the capital? Where is Portland? Oregon City? Astoria?

Washington.—By what mountains is Washington crossed? Where is Mt. St. Helens? Mt. Adams? Mt. Baker? Ranier? Olympus? Where is Puget Sound? Strait of Juan de Fuca? What river drains and partly bounds it? What and where is the capital? Seattle? Fort Colville?

ROCKY MOUNTAIN & PACIFIC
STATES & TERRITORIES.
CANADA
MONTANA
OREGON
WYOMING
UTAH
COLORADO
NEW MEXICO
SAN FRANCISCO BAY AND VICINITY

above the sea. The houses are chiefly of adobe (sun-dried brick).

Near Las Vegas there is a cluster of celebrated hot springs of various temperatures from 80° to 140°.

Zuni is a small Indian village. There are some remarkable ruins in its vicinity, supposed to be the habitations of a former generation, swept away by famine or pestilence.

9. COLORADO.—Colorado contains the highest peaks in the Rocky Mountains, and the immense elevated valleys called the "Great Parks." These Parks are inclosed by lofty mountains. The largest exceeds in size the State of Massachusetts. They have a fertile soil and luxuriant vegetation.

Among the mountains of this State are the head-springs of four large rivers, namely, the Colorado, flowing west into the Pacific; the South Platte, flowing in the opposite direction to join the Missouri; the Rio Grande, and the Arkansas.

Colorado is rich in gold, silver, lead, coal, and iron. It is one of the leading mining States, and one of the finest grazing regions in the country.

10. Denver, the capital, is nearly 5,000 feet above the sea. It is an important railroad centre. Central City is a thriving town in the gold region. Leadville is a great mining town. It is about 11,000 feet above the sea, and is one of the most elevated towns on the continent.

Colorado Springs contains four remarkable mineral springs, which, within a short distance of each other, come bubbling and boiling out of the earth, as though they were fresh from the fountain.

11. WYOMING.—Wyoming, like Colorado, is a region of great elevation.

It contains the sources of the Missouri, the Columbia, and the Green.

The Yellowstone National Park is situated in the north-western corner of this Territory. It is a tract of land 55 by 65 miles, set apart by Congress as a national park, or pleasure ground. It is remarkable for its lakes and water-falls, its deep cañons, boiling springs, and geysers.

The Great Geyser sends up a stream of water 300 feet high. The cañon of the Yellowstone is a gorge from 1,000 to 1,200 feet deep.

Rich coal beds are found, and valuable deposits of gold, silver, copper, and iron.

The soil in the river valleys, wherever irrigation is employed, produces abundant crops of grain. Grazing is an important industry.

Cheyenne (*shi-en'*) is the capital.

12. MONTANA.—Montana abounds in gold mines of surpassing wealth. The river valleys have a fertile soil and rich pasturage.

In the centre of the Territory are the great falls of the Missouri River, among the most picturesque in America.

The head of navigation of the Missouri is at Fort Benton, about 2,500 miles above St. Louis. Large numbers of steamers ascend the river to this point every season.

Helena is the capital and chief centre of trade.

Questions.—What divisions does this section comprise? **1.** What States and Territories are embraced in the Rocky Mountain Region? **2.** What is said of the surface of this region? What is the general elevation? How high are many of the peaks? **3.** What is said of the rivers? How are they fed? **4.** Why is irrigation necessary on the Great Plains? Describe the method employed. **5.** What is said of the climate? **6.** What are the chief resources of this region? **7.** By whom was New Mexico settled? What is said of its scenery? Chief products? **8.** What is said of Santa Fé? Las Vegas? Of the ruins near Zuni? **9.** What is said of the mountain peaks of Colorado? Describe the Great Parks. What rivers take their rise in Colorado? How does Colorado rank as a mining and grazing State? **10.** What is said of Denver? Central City? Leadville? Colorado Springs? **11.** What State does Wyoming resemble in surface? Where and what is the Yellowstone Park? For what is it remarkable? What is said of the mineral resources of Wyoming? What of the river valleys? Name the capital. **12.** In what does Montana abound? What portions of the Territory are fertile? To what point is the Missouri River navigable? How far is Fort Benton above St. Louis? What is said of Helena?

XLII. THE PLATEAU REGION.

1. The Plateau Region lies between the Rocky Mountains and the Sierra Nevada and Cascade ranges. It is several thousand feet above the sea, and varies in breadth from 300 to 700 miles.

It contains the State of Nevada, and the Territories of Arizona, Utah, and Idaho.

VIEW IN YOSEMITE VALLEY.

2. Surface.—The surface is very rugged. Mountain ranges traverse it in various directions. The Wahsatch, the loftiest of these, separates the elevated "Plateau of the Colorado" from the "Great Basin," which is 3,000 feet lower. Much of this region is occupied by sandy and saline tracts, salt lakes, and marshes.

Among its remarkable features are the gorges called Cañons, often several thousand feet in depth, and cut by the rivers through mountains of rock.

The most noted is the Black Cañon of the Colorado. It is more than 300 miles long, and from 3,000 to 6,000 feet deep.

3. The climate is marked by great dryness.

The prevailing winds come from the Pacific laden with moisture. But in crossing the cold peaks of the Sierra Nevada they are chilled, and deposit their moisture as rain or snow. When, therefore, they reach the Plateau Region they are dry winds.

Owing to the almost entire absence of moisture, the changes of temperature are very rapid. It is often 70° or 80° at noon, and below freezing-point at sunrise.

4. Minerals.—The hills and mountains that rise up from this plateau are stored with rich mineral deposits. Silver, gold, copper, and quicksilver, tin, zinc, lead, and other metals are found, with beds of salt and soda of unknown extent.

The chief industry of this region, therefore, is mining.

5. Vegetation.—Here and there the river banks and mountain valleys are fertile. But this region is, for the most part, a barren waste. Its arid plains are covered with gray sage-brush and cactus.

6. NEVADA.—The mines of this State constitute its chief source of wealth. They yield one-third of all the silver annually mined in the United States, and more than half of all the lead.

The "Muddy Salt Mine," is the largest deposit of rock-salt known in the country. It is two square miles in area.

Some of the valleys are very fertile, and stock-raising is one of the occupations of the people. Most of the State, however, is unsuitable for agriculture.

7. Virginia City is celebrated for the richness of its silver mines. It is the depot of supplies for miners.

Carson City is the capital. Hamilton and Gold Hill are mining towns.

8. ARIZONA.—Arizona, like the other Territories along the slopes of the Rocky Mountains, is rich in mines of gold and silver. Its resources are being rapidly developed.

It is one of the hottest and driest sections of the United States.

Prescott, the capital, and Tucson are the centres of trade.

9. UTAH.—Utah is traversed by the Wahsatch Mountains. At their western base lies the Great Salt Lake, 75 miles long.

Mines of silver, copper, and coal are extensively worked; and, by a system of irrigation, the agricultural resources of the Territory have been wonderfully developed.

Utah is inhabited chiefly by the Mormons, or "Latter-day Saints." They claim to have a new revelation, and practise polygamy.

Salt Lake City is the chief city and the capital.

10. IDAHO.—Idaho is mountainous.

Its gold and silver mines are very productive, and its valleys are fertile and adapted to stock-raising.

Boise City is the capital.

Questions.—**1.** What is said of the Plateau Region? What does it contain? **2.** What is said of its surface? Describe the cañons. **3.** What is said of the climate? Explain its dryness. **4.** What are the mineral deposits? Chief industry? **5.** What is said of the vegetation of this region? **6.** What is the source of the wealth of Nevada? How much silver does it yield every year? How much lead? Describe the Muddy Salt Mine. Is the State generally adapted to agriculture? **7.** What is said of Virginia City? Carson City? Hamilton and Gold Hill? **8.** In what is Arizona rich? What is its climate? Name the two centres of trade. **9.** What mountains traverse Utah? Where is the Great Salt Lake? What are the mineral productions? How is the soil made productive? Who are the inhabitants? Name the capital. **10.** What is said of the surface of Idaho? Its resources? Its capital?

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XLIII. COAST REGION.

1. This region embraces California, Oregon, and Washington Territory. It is traversed from north to south by the Sierra Nevada and Cascade ranges. The low coast range stretches along the shore. Between these lie the great valleys which form the most important parts of this region.

The principal rivers are the Columbia, which, in the lower portion of its course, forms the boundary between Oregon and Washington, and the Sacramento and San Joaquin (*san-wah-keen*), which traverse the Valley of California.

2. Climate.—The climate of this region is widely different from the climate of the Atlantic coast in the same latitude.

This is caused by the prevailing winds. In both regions they are westerly. But on the Atlantic side they are from the land, and in winter are cold; on the Pacific they come from the sea, and are warm and moist.

Oregon and the New England States are in the same latitude. In New England the farmers have to house and feed their cattle all the winter, while in Oregon the pastures are green all the year round, and the cattle require no shelter.

Summer and winter in California are often called the *dry* season and the *rainy* season. In summer, for weeks together, not a drop of rain falls. In Oregon and Washington Territory, however, the summer rains are more copious, and the country is well watered.

3. Resources.—The deposits of gold and quicksilver are among the richest in the world. The soil of the valleys is marvellously productive.

Fruits, flowers, and vegetables are famous for their beauty and size, and the yield of wheat is often 50 bushels to the acre. Immense herds of cattle and flocks of sheep find rich pasturage.

The slopes of the mountains are covered with forests of pine, fir, and cedar.

4. CALIFORNIA.—This is the oldest of the Pacific States.

The Spanish Jesuits established *missions* or settlements in it at an early day. But it was thinly settled until it was purchased from Mexico, in 1848, by the United States.

Soon after this date gold was discovered, and people flocked to the mines from all parts of the world.

California is the leading State in the Union in the production of gold, and is one of the chief sources of the world's supply of quicksilver.

VIEW THROUGH THE TRUNK OF A CALIFORNIA TREE.

Agriculture is by far the most important industry of the State. Wheat, barley, and oats are extensively cultivated. The wheat crop is more than twice as valuable as the yield of gold.

California wheat is remarkable for its hardness. It can stand the longest sea-voyages without damage.

The orange, the lemon, the olive, the almond, and the grape flourish luxuriantly. California is the first wine-producing State in the Union.

It is also a fine grazing country. The wool clip exceeds that of any other State.

The climate is favorable to the raising of the silk-worm, and the production of silk is an important and growing industry.

5. California is noted for its remarkable scenery.

The Yosemite (*yo-sem-i-te*) Valley is a gorge of singular grandeur. Its rocky walls are several thousand feet in height. The Merced River

6. San Francisco is the largest city and most important seaport on the American shore of the Pacific. Lines of steamers connect it with China, Japan, Australia, and the Sandwich Islands.

By means of these steamship lines and the Pacific railroads, a large and growing trade is carried on between these countries and the United States. Most of the silk, and a large part of the tea imported from China and Japan are brought to San Francisco.

Sacramento is the capital, and an important centre of trade. San José (*hosay'*), Stockton, Los Angeles, Marysville, and Vallejo (*val-lay'ho*) are thriving towns.

7. Oregon.—This State is in the same latitude as New England. Its climate, however, resembles that of Maryland. The winters are mild and the summers not oppressive. The rainfall is abundant.

The most fertile part of the State lies in the valley region between the Cascade Mountains and the ocean.

Oregon is a fine grain and fruit country. Stock-raising and wool-growing are important industries.

The entrance to the Columbia River forms the best harbor on the Oregon coast. Ocean steamers ascend this river and the Willamette to Portland.

The industries of Oregon are chiefly agriculture and grazing. It has, therefore, no large towns.

Portland is the largest city, and Salem the capital.

8. Washington.—East of the Cascade Range, Washington occupies a part of the Plateau Region, and is chiefly a grazing country. Its western portion is covered with dense forests of pines and cedars.

The north-west corner of the Territory is penetrated by Puget Sound. This Sound, with its connections, furnishes navigable routes for a distance of nearly 200 miles into the interior.

The shores of these inland waters are heavily timbered, and possess excellent harbors. Immense quantities of lumber are produced, and constitute the chief article of export. Masts and spars are shipped hence to Europe and Asia.

The region of Puget Sound is rich in coal, and its waters swarm with salmon and other fish.

The Columbia River, as it passes through this Territory, has some beautiful falls, which afford effective water-power.

Olympia, the capital, stands at the head of Puget Sound.

9. Alaska.—The Territory of Alaska was purchased from Russia in 1867. Its shores are bathed by the Japan Stream, a mighty current in the Pacific resembling the Gulf Stream in the Atlantic. It tempers the climate of Alaska and the Aleutian Islands as the Gulf Stream tempers that of Norway and Iceland.

The prevailing winds are westerly. Coming from the sea, they give a moist climate to the coast, in the neighborhood of which heavy forests of spruce, fir, cedar, and pine are found. Grass grows luxuriantly, root crops and berries do well. Large quantities of cranberries are exported to San Francisco.

The inhabitants are mainly Indians and Esquimaux, who live by fishing, and who hunt sea-otters, seals, martens, foxes, bears, and wolves. The seal-fishery is the most valuable in the world.

The capital and chief settlement is Sitka.

Mount St. Elias is probably the highest mountain in North America. It is about 18,000 feet high. With its everlasting cap of snow, it stands as a landmark between Alaska and the British Possessions.

The Aleutian Islands are volcanic and treeless; the natives dwell in caves and live upon the beauties of the sea. They depend for wood, from which to make canoes, implements, and utensils of various sorts, upon the drift from Asia, which is cast upon their shores by the Japan current.

Questions.—**1.** What does the Coast Region embrace? Name its mountains. Most important parts. Chief rivers. **2.** Is the climate like that of the Atlantic coast? Why not? Compare New England and Oregon. How are the seasons named in California? When does it rain there? **3.** What is said of the mineral deposits of this region? Agricultural resources? Of the forests? **4.** Who first settled California? When was it purchased by the United States? What is said of its gold product? What is its most important industry? Name the leading agricultural products. What is said of the wheat crop? Vegetables and fruits? The wine product? What is the chief grazing product? What is said of the silk interest? **5.** Describe the Yosemite Valley. The great trees. **6.** What is said of San Francisco? Sacramento? Name other important towns. **7.** What is said of the climate of Oregon? What is the most fertile part of the State? What are its leading agricultural products? What is said of its forest wealth? Its mineral resources? Its yield of fish? What is the best harbor on the Oregon coast? Why has Oregon no large towns? Name the largest and the capital. **8.** What is said of the eastern portion of Washington? The western? How far does Puget Sound penetrate this Territory? What is the chief article of export? What mineral is found near Puget Sound? What is said of the fish? Name the capital. **9.** To what country did Alaska formerly belong? What current tempers its climate? What is said of the vegetation? Who are the inhabitants? How are they occupied? What is said of Mt. St. Elias? What is said of the Aleutian Islands?

BRITISH AMERICA.

XLIV. DOMINION OF CANADA.

1. British America includes all of North America north of the United States, with the exception of Alaska and Greenland.

Its area is about equal to that of the United States.

2. **Divisions.**—British America consists of two divisions:

I. The Dominion of Canada. II. The Province of Newfoundland, which also includes Labrador.

3. The **DOMINION OF CANADA** is a confederation comprising the Provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Manitoba, British Columbia, and Prince Edward Island, with the District of Keewatin and the North-east and North-west Territories.

4. **Government.**—The Dominion is governed by a Parliament and Governor-General, somewhat as the United States are by a Congress and President, but with this difference, that whereas our President is elected by vote, the Governor of Canada is appointed by the British Sovereign.

The Canadian Parliament consists of two branches. The members of the lower House are elected by the people; those of the upper are appointed by the Governor-General.

5. **Resources.**—The chief resources of Canada are her fisheries, which are among the most valuable in the world, her forests, and her productive lands in the basin of the St. Lawrence and in the "fertile belt."

The **Fertile Belt** embraces the region between Lake Superior and the shores of the Pacific.

It lies between the same parallels as a portion of Labrador, but presents a strange contrast to that country. In Labrador we find treeless plains, white with snow for eight months in the year, and, except in sheltered spots, vegetation of the scantiest description.

Upon the "fertile belt" the snow is light, and immense herds of buffalo find pasturage all winter. It is a good grass country, and capable of becoming one of the great wheat gardens of the world.

6. **The industries** of the people are mainly agriculture, lumbering, ship-building, fishing, and commerce.

The COMMERCE of the country is extensive, and is carried on chiefly with England and the United States.

TRADE ROUTES.—The Great Lakes, with the Welland Canal and the St. Lawrence, constitute the most important water route for Canadian commerce.

Railways connect the principal cities along the Lakes and on the St. Lawrence with the seaboard.

The Red River of the North and the Saskatchewan traverse the "fertile belt," and with Lake Winnipeg, Nelson River, and Hudson Bay furnish, during the summer months, continuous water routes to the ocean.

7. **Ontario.**—Ontario is bordered by four of the Great Lakes and has a climate like that of Michigan.

Coal, iron, petroleum, copper, and gold are among its mineral resources.

Wheat and lumber are the principal productions.

The forests abound with the sugar-maple, and the making of sugar from it is an important branch of winter industry.

Ontario is the most populous, productive, and prosperous of the provinces.

It was settled chiefly by English and Americans, and English is the language generally spoken. The inhabitants are mainly Protestants.

Toronto is the capital and chief city of the Province. It enjoys a large lake trade.

Ottawa, the capital of the Dominion, contains a magnificent Parliament House.

8. **Quebec.**—The Province of Quebec has a colder climate than Ontario.

The westerly winds do not reach it until they have lost the warmth which they received in crossing the Lakes.

The inhabitants are mainly descendants of the early French settlers. They profess the religion of their fathers, which is Roman Catholic, and use the French language.

The records of the Dominion are kept in both English and French.

Quebec, the capital of the Province of Quebec, is beautifully situated on a high bluff.

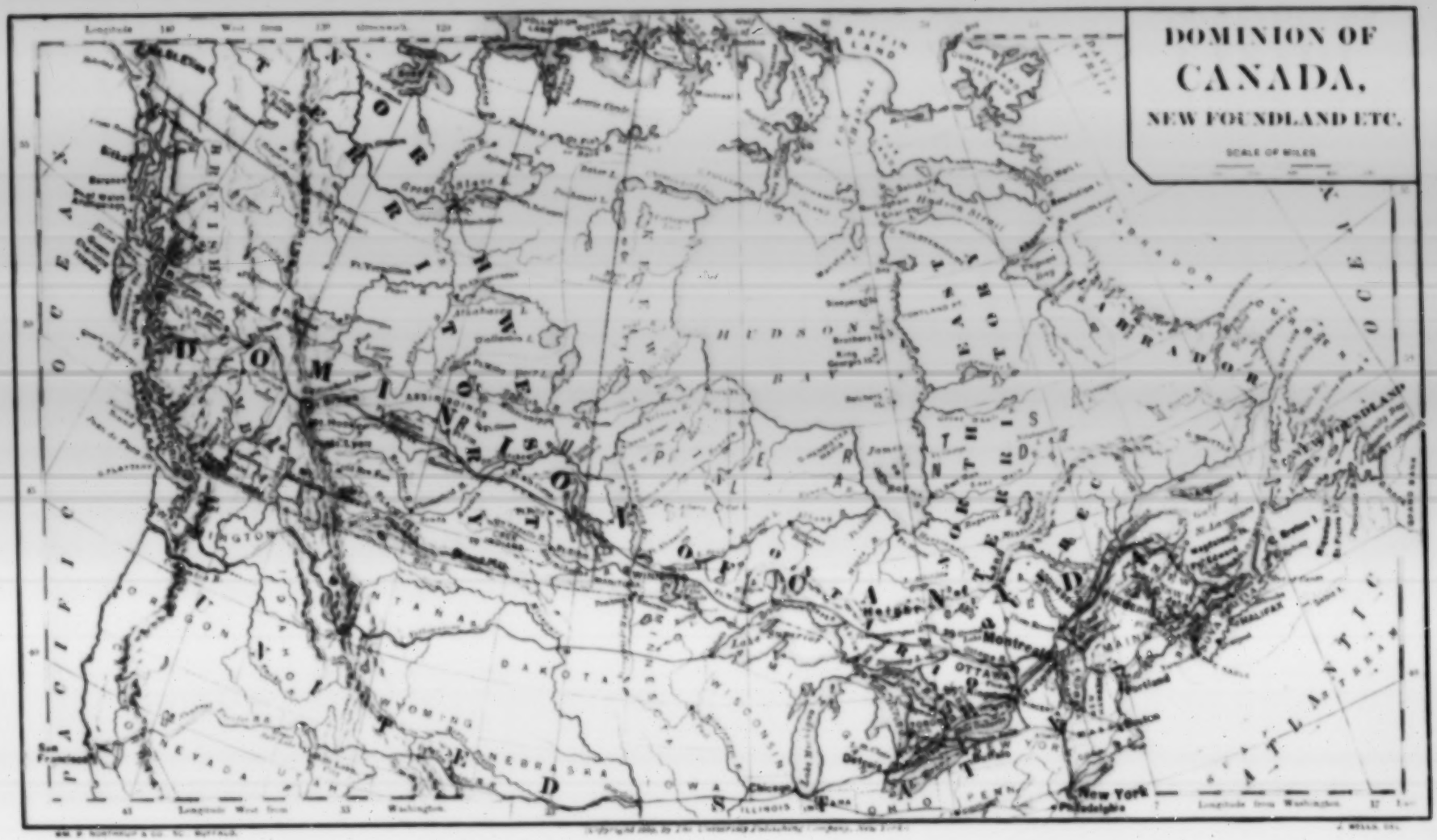
It is a walled town, and is so strongly fortified that it is called "The Gibraltar of America."

In 1759 a celebrated battle, which gave Canada to England, was fought between the French and English before the walls of Quebec. General Wolfe and the Marquis of Montcalm, the two opposing generals, both fell, each bravely leading his forces into battle. A single monument has been erected in honor alike of the vanquished and the victor.

THE FALLS AND NATURAL STEPS OF MONTMORENCI.

The scenery around Quebec is enchanting. In the vicinity are the picturesque falls and the natural steps of Montmorenci.

Montreal is the largest city in the Dominion. It has an extensive commerce, and exports a large amount of wheat.



MAP STUDIES.

BRITISH AMERICA.

Provinces.	Area in Sq. Miles.	Population.
Dominion of Canada	3,472,204	3,686,096
Ontario	107,780	1,620,851
Quebec	193,314	1,191,516
New Brunswick	27,322	285,594
Nova Scotia	21,731	387,800
Prince Edward Island	2,133	94,021
Manitoba	13,689	12,228
British Columbia	356,000	33,556
The Territories	2,949,000	60,300
Newfoundland	40,200	146,536
Labrador (est.)	450,000	7,000

General Questions.—What provinces of British America border on the Atlantic? What great body of water in the interior? What great river flows north-eastwardly into the Atlantic? What mountain range traverses the western part of the Dominion? What ridge crosses the south-east portion? Ans. *Height of Land.*

Ontario.—Natural boundaries on the south? North? Lake on the west? River on the east? What city on the Ottawa? Where is Toronto? Kingston? Hamilton? What is the capital?

Quebec.—On what river valley is Quebec a part? What forms part of the northern boundary? What gulf on the south-east? Where is the Saguenay River? What and where is the capital? What city at the mouth of the Ottawa?

New Brunswick.—What peninsula to the east? What river on the west? Bay on the south? Gulf on the north? What is the capital?

Nova Scotia.—What is the form of Nova Scotia? What island to the north-east? To the north? What separates Cape Breton Island from Nova Scotia? Where is Cape Sable? What is the capital?

Prince Edward Island.—In what gulf is Prince Edward Island? What is the capital?

Manitoba.—Bound Manitoba. What river crosses it? What lakes on the northern border? What is the capital?

British Columbia.—On what ocean does Columbia border? What mountains form part of the eastern border? Name some of the highest peaks. Where is Mt. Fairweather? What large island lies south-west of Columbia? Name other islands off the coast. What and where is the capital of Columbia and Vancouver? Where is New Westminster?

The Territories.—Where is Lake Winnipeg? Athabasca? Great Slave? Great Bear? Hudson Strait? Southampton Island?

Newfoundland.—What strait separates Newfoundland from the mainland? What gulf from Cape Breton? Where is Cape Race? What bank to the eastward? Where is Trinity Bay? Heart's Content? What is the capital? What province on the Atlantic shore north-east of Quebec?

9. **New Brunswick** abounds in coal and iron, its forests yield large supplies of ship-timber.

The people are chiefly employed in the lumber business and the sea-fisheries.

Fredericton is the capital. St. John is the largest town.

10. **Nova Scotia.**—Nova Scotia is a peninsula. The island of Cape Breton belongs to it.

The shores of Nova Scotia and New Brunswick are scoured by the tides of the Bay of Fundy. These tides attain the enormous height of sixty, and sometimes even seventy, feet above low-water mark. They are the highest in the world.

The climate of Nova Scotia is healthful and somewhat tempered by the Gulf Stream.

Coal, iron, and gypsum abound, and are extensively mined. The forest wealth of the Province is great. The fisheries rank next to those of Newfoundland.

Halifax is a flourishing town, and has a large trade with the United States, chiefly in potatoes, fish, coal, gypsum, and grindstones. Its lumber business is important.

The harbor of Halifax is unsurpassed by any in America. It is the principal naval station of Great Britain on this side of the Atlantic.

11. **Prince Edward Island.**—This island lies in the Gulf of St. Lawrence.

It has a milder climate than the neighboring mainland.

The chief industries are agriculture and fishing.

Charlotte Town is the capital.

12. **Manitoba** is situated in the "fertile belt," and has a climate and soil well adapted to the cultivation of wheat.

The population is made up chiefly of the descendants of early Scotch and French settlers, and of half-breeds and Indians. Winnipeg is the capital.

13. **British Columbia.**—British Columbia includes Vancouver Island.

The Province contains extensive forests, but minerals are its chief source of wealth. Vancouver abounds in coal; Columbia in gold.

The prevailing winds come from the sea, and the climate is so mild that cattle need no shelter in winter.

A Canadian Pacific Railway to connect British Columbia with Ontario is in process of construction.

Victoria, on Vancouver Island, is the capital.

14. The **North-west** and **North-east Territories** and the **District of Keewatin** consist of wild prairies and forests, and treeless wastes covered with moss and lichens, ice and snow.

The forests are the home of the beaver, the marten, and other fur-bearing animals.

No villages are found north of latitude 54. Only here and there are the trading-posts of the Indians and trappers.

Battleford is the seat of government for the Territories. Keewatin is governed by the Lieutenant-Governor of Manitoba.

Questions.—1. What does British America include? 2. The divisions? 3. What does the Dominion of Canada comprise? 4. How is the Dominion governed? Of what does the Parliament consist? 5. Resources? Fertile Belt? 6. Principal industries? What of the commerce? Trade routes? 7. How does Ontario resemble Michigan? What are its minerals? Principal productions? What do the forests yield besides lumber? How does Ontario rank among the Provinces? By whom was it settled? What is said of Toronto? Ottawa? 8. How does the climate of Quebec compare with that of Ontario? What of the inhabitants? What is said of Quebec? Montreal? 9. In what does New Brunswick abound? What of its forests? How are the people chiefly employed? What is the capital? The largest town? 10. What is Nova Scotia in form? What island belongs to it? Describe the tides in the Bay of Fundy. What of the climate? What minerals abound? What is said of the forests and fisheries? Of Halifax? 11. Where is Prince Edward Island? The industries? Name the capital. 12. Where is Manitoba? What is its great product? Population? Capital? 13. What does British Columbia include? What are its resources? Climate? Capital? 14. Name the Territories and Districts. Of what do they consist? What is said of the forests? How far north are villages found? What is said of Battleford? How is Keewatin governed?

XLV. NEWFOUNDLAND. DANISH AMERICA.

1. **Newfoundland.**—Newfoundland is cold and sterile; the soil does not yield enough to feed the people. Fishing and seal catching are almost the only occupations.

St. John's is the capital. In this city entire acres of ground are covered with sheds that are shingled over with cod-fish, split in two, and spread out to dry; and in the harbor ships from all parts of the world may be seen taking in cargoes of fish.

The **Grand Banks** lie to the east and of this island. They are elevated plateaus rising from the bottom of the ocean. In area they are about twice as large as the State of New York. The depth of the water upon them varies from 100 to 600 feet.

These Banks are one of the treasuries of the ocean. They are the largest and most valuable fishing grounds in the world. In the spring and summer of every year, immense shoals of cod, mackerel, and other fish resort to them, and are taken in great numbers by French, English, and American fishermen.

The Atlantic Telegraph lies partly upon these Banks, and terminates on the American side at Heart's Content, in Newfoundland.

Off the shores of Newfoundland the cold current which comes down through Davis Straits meets the warm waters of the Gulf Stream. It chills the vapor that rises from these waters, and thus produces the dense fogs which prevail in this region, and make navigation dangerous.

The same cold current brings down from the Arctic regions huge icebergs, some of them more than one hundred feet high, and reaching hundreds of feet below the surface. They often beset the Grand Banks.

2. Labrador is a cold and inhospitable country.

Although in the latitude of some of the forest parts of Great Britain, it has a climate too severe to ripen even the hardiest grains; potatoes and a few other vegetables sometimes do well.

The country is resorted to in the summer by fishermen and trappers for the sake of seals and other fur-bearing animals.

The scanty population of northern Labrador consists mainly of Esquimaux.

3. DANISH AMERICA comprises Greenland and Iceland. (See map, page 19.)

4. Greenland.—Of Greenland little is known, except the western and southern coasts. It stretches to an unknown extent toward the Pole.

The interior seems like one immense glacier, and some have supposed that Greenland was made up of a multitude of ice-islands frozen together.

The trees are not more than six feet high. A few grasses grow, and buttercups and dandelions are found. Some vegetables are occasionally raised, but the hardiest cereals have failed.

The population consists of about 1,000 Danes, with an Esquimaux element numbering 9,000.

The skins of seals, reindeer, and other animals, with eider-down, whale-oil, whalebone, and fish are exported.

Upernavik, in latitude 73°, is the most northerly abode of man.

Fredericksthab is famous as the place where Otto Fabricius spent the long winter nights translating the Scriptures into the Greenland language.

5. Iceland.—Iceland is remarkable for its volcanoes and boiling springs or Geysers (*ghi zers*).

Mount Hecla is the most noted volcano. The Great Geyser sends up a stream of water 300 feet high.

The vegetation of Iceland is not so dwarfed and scanty as that of Greenland.

The warm waters of the Gulf Stream temper the climate. Grain will not ripen, but vegetables are raised, and enough grass grows to sustain cattle and sheep. Wool is exported.

Reindeer run wild. Sea-fowl, including the eider-duck, abound, and the waters swarm with fish.

The population is about 60,000. The people are fond of literature, and have made valuable contributions to the history of America, which appears to have been settled by Norsemen 500 years before Columbus. Reykjavik (*rik yak-vik*), the chief town, is a small hamlet.

Questions.—**1.** What is said of Newfoundland? The main occupations? What is said of St. Johns? What are the Grand Banks? Area? What is their value? What fish are caught? What of the Atlantic Telegraph? What causes the fogs? What is said of the icebergs? **2.** Describe the climate of Labrador. What of its vegetable products? What animals are caught? Population? **3.** Of what does Danish America consist? **4.** What is known of Greenland? Its extent? Vegetation? Population? Exports? Its towns? **5.** For what is Iceland remarkable? Describe its vegetation. What valuable animals are found here? What of the fish? Population? Chief town?

MEXICO.

XLVI. DESCRIPTION.

1. Mexico lies south of the United States, and between the Gulf of Mexico and the Pacific Ocean.

2. Surface.—The greater part of the country is an immense table-land lying between two ranges of lofty mountains, with a belt of lowland on both coasts.

The lowland varies in breadth from a few miles to one hundred or more.

The table-land rises precipitously from the lowland, and is from 5,000 to 8,000 feet above the sea. Upon it are mountains of great elevation.

Many of their peaks are capped with perpetual snow. Some of them are volcanoes, as Orizaba and Popocatepetl (*smoking mountain*).

3. Climate.—Mexico, like all tropical countries, has a *dry* and a *rainy* season. The latter begins in June and lasts till November.

The temperature varies with the elevation.

The lowland region is hot and unhealthy. The Mexicans call it *Tierra Caliente* (hot land).

Its diseases are terrible; the yellow fever is the most common and fatal.

The table-land is known as *Tierra Templada* (temperate land). Its climate is delightful.

The houses are built without chimneys, as the winters are not cold enough to make fires necessary. The heat in summer is not oppressive.

Violets are in bloom, strawberries are ripe, and green peas in season all the year.

4. Mines.—The table-land is rich in mines of gold and silver, copper, lead, tin, quicksilver, zinc, and iron.

It is a part of that great mountain system, consisting of the Rocky Mountains and the Andes, which so abounds in minerals that it may fitly be called the metalliferous treasury of the earth.

Sonora, Chihuahua (*che-wah-wah*), and Guerrero (*ghe-ray-ro*), etc., are the provinces richest in minerals.

5. Productions.—The lowlands abound in forests containing mahogany and other cabinet woods. Among the vegetable products are sugar, the banana, the vanilla bean, cocoa, and the pulque (*pool kay*) plant, or Mexican aloe.

From the cocoa we get chocolate, a beverage bearing nearly the same name as the Mexicans gave it, *chocolatl*.

MAP STUDIES.

MEXICO, CENTRAL AMERICA, THE WEST INDIES.

Countries.	Area in sq. Miles.	Population.
Mexico	743,945	9,343,479
Central America.		
Guatemala	41,730	1,190,734
San Salvador	9,594	434,520
Honduras	35,500	250,000
Nicaragua	49,600	350,000
Costa Rica	25,040	180,000
West Indies	94,722	4,194,700
Balize (British Colony)	13,500	25,635

General Questions.—Describe the position of Mexico. Of Central America. The West Indies. What waters do these islands nearly inclose? Within what zone do the above countries almost wholly lie?

Mexico.—What country on the north?—South-east? What natural boundaries on the east and west? What peninsulas form parts of Mexico? What isthmus forms a part of it? What river separates it from Texas? Where is the Bay of Campeache? Gulf of California? What valuable product is obtained from the Gulf of California? Ans. *Pearls.* Where is Cape San Lucas? Cape Catoche? What mountains traverse Mexico? What volcanoes in the country? What portions of Mexico are lowland? Where is the capital? What seaports on the Gulf of Mexico? On the Pacific? Two cities north-west of Mexico? Where is Chihuahua? San Luis Potosi? Puebla?

Central America.—What are the political divisions of Central America? Which is the most northern? The most southern? Where is the Bay of Honduras? Where is Lake Nicaragua? How is it connected with the Atlantic? Ans. *By the San Juan River.* Where is the Mosquito Coast? What are the mountains of Central America? What two grand mountain systems do they connect? Ans. *They are links connecting the Rocky Mountains and the Andes.* Has Central America many volcanoes? Ans. *Yes; more in proportion to its area than any other part of the world.* Name some of the volcanoes. Give the capital of each state.

West Indies.—By what bodies of water are the West Indies surrounded? What are the grand divisions of these islands? Where are the Bahamas? What historic interest has Watling Island? Name the largest of the Greater Antilles. What are the Windward Islands? Ans. *The south-easternmost of the Lesser Antilles.* Why are they so called? Ans. *Because they are on the quarter from which the trade-wind constantly blows.* What is the capital of Cuba? Of Jamaica? Of Hayti? San Domingo? Porto Rico? Where is Santa Cruz? Curaçoa? Trinidad? What strait between Florida and the Bahamas? What passes through it? Ans. *The Gulf Stream.*

The maguey or pulqué plant is peculiar to Mexico. Its leaves served the Aztecs in place of paper. The juice when fermented is the national beverage. A variety of the pulqué plant yields a kind of hemp called, from the place of its export, Sisal (*se-sah!*) hemp.

MAGUEY.

The productions of the table-land are cotton, coffee, tobacco, and grain.

The cotton plant produces for several years together.

In many districts three, and even four crops of Indian corn are raised during the year. It is one of the great food plants of Mexico.

The inhabitants of the Tierras Calientes subsist largely upon the banana and plantain.

Silver, mahogany, hides, and cochineal are the chief exports.

A species of cactus supports the cochineal insect, the body of which is dried and used as a scarlet dye.

6. Race and Religion.—The Spaniards are the dominant race. Their language is the language of the country. They are Roman Catholics. All forms of religion are tolerated.

7. Government.—In 1821 Mexico became independent of Spain. It is a Federal Republic, consisting of twenty-seven States, one Territory, and a Federal District.

8. Cities.—Mexico, the capital, is situated upon the table-land, and is encircled by lofty mountains. A railroad connects it with the Gulf, at Vera Cruz. Leon, Puebla, Guadalaxara, (*gwah-da-la-hah'ra*), Queretaro, and Guanaxuato (*gwah-na-hwah'-to*), are also important cities on the table-land.

Vera Cruz and Tampico (*tam-pee'ko*) are the chief seaports on the Gulf coast; Guaymas (*gwi'mahs*), Mazatlan, San Blas, Acapulco, on the Pacific.

The city of Jalapa, situated on high and healthy ground, is the resort of the citizens of Vera Cruz in the sickly season.

Questions.—**1.** How is Mexico situated? **2.** Of what does the surface consist? What is said of the lowland? The table-land? Name two of the volcanoes. **3.** How are the seasons marked? When is the rainy season? Describe the climate of the lowland. What is this region called? What is the upland called? Describe its climate. **4.** Mines? Name the richest provinces. **5.** Productions of the lowland? The pulqué plant? The productions of the table-land? Exports. **6.** Who are the dominant race? Religion? **7.** Form of government? **8.** What is said of the City of Mexico? Name other cities on the table-land. What are the seaports on the Gulf? On the Pacific? What is said of Jalapa?

CENTRAL AMERICA.

XLVII. DESCRIPTION.

1. Position.—The States of Central America occupy the extreme southern portion of our continent, and lie between the Caribbean Sea and the Pacific Ocean.

They include the five republics of Guatemala (*gwah-te-mah'-la*), San Salvador, Honduras, Nicaragua (*nik-ar-ah' gwah*), Costa Rica, together with the British colony of Balize, or British Honduras.

These five republics, together, are not so large as the State of California; nor is their entire population equal to that of the State of New York.

2. In Surface Central America resembles Mexico. It is situated in a belt of volcanic fires that girdles the Pacific Ocean.

Coseguina (*ko-say-ghee'-nah*) is noted for its eruption in 1835, when the air was darkened by its ashes, even at places 50 miles distant.

3. Minerals.—The mountains are richly stored with gold, silver, and other minerals.

4. Climate.—The climate is like that of Mexico; the soil is generous, and it is harvest-time the live-long year.

Yet these countries are not prosperous, because their inhabitants are wanting in industry and [illegible].

5. Productions.—The principal productions are coffee, cocoa, and sugar, indigo, tobacco, and vanilla.

The forests abound in mahogany, rosewood, and dye-woods.

The chief exports are cochineal, coffee, and indigo, cabinet and dye woods.

6. Race and Religion.—The States of Central America once belonged to Spain. The dominant race is of Spanish blood. Their language is Spanish; their religion, the Roman Catholic.

7. Cities.—The largest city is New Guatemala, and the capitals of the other republics are San Salvador, Tegucigalpa, Managua, and San José.

Questions.—**1.** What part of the continent do States of Central America occupy? Name them. How large are they? **2.** What of the surface? Of what belt does Central America form a part? **3.** What of the mineral resources? **4.** Climate? Harvest-time? Are these countries prosperous? **5.** Productions? Exports? **6.** Race and religion? **7.** Name the capitals.

THE WEST INDIES.

XLVIII. DESCRIPTION.

1. Position and Surface.—These islands are like stepping-stones across the ocean from Florida to the Orinoco; they are in sight from one to another, almost all the way.

They divide the Caribbean Sea and Gulf of Mexico from the Atlantic. They keep out the tidal-wave, and make that sea and gulf nearly tideless.

All of these islands are mountainous except the Bahamas, which are low coral islands.

2. Area.—The area of the whole group taken together is about twice that of the State of New York.

3. Divisions.—These islands form three divisions: the Bahamas, Greater Antilles, and Lesser Antilles.

The Greater Antilles are Cuba, Hayti, Jamaica, and Porto Rico. The Lesser Antilles are the group lying between Porto Rico and the mouth of the Orinoco.

4. Government.—None of these islands, except Hayti, is independent.

Cuba and Porto Rico belong to Spain, and are governed by the Captain-General of Cuba.

Martinique, St. Bartholomew, and Guadeloupe belong to France; St. Thomas, San Juan, and Santa Cruz to Denmark; Curaçao (*Ku-ra-so'*) and St. Eustatia to the Dutch; the Bahamas, Jamaica, and most of the Lesser Antilles to Great Britain.

5. The **population** nearly equals that of Pennsylvania. The inhabitants are mostly negroes or the descendants of Spanish settlers. Spanish is generally spoken.

6. Climate.—The West Indies, with the exception of the Bahamas, are all in the Torrid Zone. They have a hot climate, and during the summer months an abundant rainfall.

7. Productions.—Among the productions are the yam, the plantain, and banana. Upon these the people largely depend for food.

The chief products exported are sugar, molasses, coffee, tobacco, and ginger.

8. Cuba is called the "Queen of the Antilles." It is 720 miles long, and averages 60 miles in width. It embraces half the area of all the islands together.

Havana, the capital, is the greatest sugar market of the world. It is the largest city in the West Indies.

The cathedral contains the remains of Christopher Columbus.

Matanzas and Santiago are important seaports.

9. Hayti is divided into the Republics of San Domingo and Hayti.

This island is unsurpassed in agricultural and mineral resources, which as yet are undeveloped. It is inhabited chiefly by negroes and mulattoes numbering about half a million.

San Domingo, the capital of the Republic of the same name, is the oldest of the cities founded by Europeans in the New World. It was established in 1504. Port-au-Prince is the capital of Hayti.

10. Jamaica is the third island in size. Kingston is the chief city.

11. St. Thomas derives its importance from its fine harbor. It is a free port, where vessels pay no duty.

In consequence of this, the West India mail-steamers of England and France have made it their place of rendezvous, where they meet the smaller steamers and exchange cargoes and passengers.

12. Barbadoes is an English colony.

The colored men of this island make excellent sailors.

13. Trinidad (*Trinity*) almost joins South America.

It is celebrated for a lake of pitch from which immense quantities are annually taken, while yet there is no perceptible diminution of it. It rises up from the earth as fast as it is taken away. It is used to make the composition with which some of the streets and sidewalks of Paris are paved.

14. The Bahama Islands are formed of coral rock. Sponges, coral, and green turtles are exported.

WATLING ISLAND was the first land discovered by Columbus in 1492.

A STREET SCENE IN HAVANA.

The TURK'S ISLANDS export large quantities of salt. This is obtained from sea-water evaporated in "salt-pans."

Nassau, the capital of the Bahamas, is a great resort for invalids.

15. The Bermudas consist of nearly 400 coral isles, and belong to Great Britain. Five of them are inhabited. They export large quantities of vegetables to the United States.

The houses are built of blocks of coral sawn into shape. These harden when exposed to the air. A single frost would crumble all the buildings.

Questions.—**1.** Between what points do the West Indies lie? What sheets of water do they divide? What effect have they upon this Gulf and Sea? Surface? **2.** Area? **3.** Divisions? What are the Greater Antilles? The Lesser? **4.** Which of these islands is independent? Which belong to Spain? To France? Denmark? The Netherlands? Great Britain? **5.** What is said of the population? Language? **6.** Climate? **7.** Productions? Exports? **8.** What is Cuba called? Area? What of Havana? **9.** How is Hayti divided? What is said of the inhabitants? Resources? Capital? What of San Domingo? **10.** What island ranks third in size? What is the chief city? **11.** What gives importance to St. Thomas? Why is it a place of rendezvous for steamers? **12.** What is said of Barbadoes? **13.** Where is Trinidad? For what famed? **14.** What is said of the Bahamas? Exports? What of Watling Island? Turk's Islands? Nassau? **15.** What is said of the Bermudas?

ANIMAL AND VEGETABLE LIFE OF SOUTH AMERICA.

SOUTH AMERICA.

MAP STUDIES.

PHYSICAL SOUTH AMERICA.

Outline.—What two oceans surround South America? What sea on the north? Great ocean current on the north-western coast? What current follows the Brazilian coast? What great current on the west coast? How is South America united with North America? What is the shape of the continent? What directions have the Atlantic coasts of South America? What is the general direction of the Pacific coast? What bay and gulf on opposite sides of the Isthmus of Panama? What island forms the southern extremity of the continent? What group to the east? What islands on the equator? What islands off the northern coast? What island at the mouth of the Amazon? What strait between Tierra del Fuego and the mainland? What is the most northern point of the continent? Southern? Eastern? Western? What cape north of St. Augustin? What winds blow constantly within the Tropics (see page 14, paragraph 2)? Which of these winds blow upon the coast between Cape St. Roque and Cape Frio? Which does the northeast coast receive? What part of the coast is rainless? What cape on the Brazilian coast near the Tropic of Capricorn? What desert on the western coast opposite to this cape?

Surface.—Judging by the colors of the map, is most of South America high or low? Where is the most elevated portion? What mountains form it? Point out the Cumbre. Loom-bray. Pass. (*It leads from Valparaiso to Mendoza, under the shadow of Aconcagua. The summit of Aconcagua is several thousand feet above the snow-line. A railroad now crosses this pass.*)

Where does the lowland chiefly lie? What two highlands in the eastern part of the continent? What great plateau in the western? What lies between these high regions? What three river basins does the Central Plain comprise? What name is given to the grassy plains in the valley of the Orinoco? To the forest plains of the Amazon? Where are the Pampas?

Rivers and Lakes.—What great rivers drain South America? Among what mountains does the Amazon rise? (*Lake Lauricocha is the source of the Upper Amazon.*) Where is the Huallaga? The Ucayale? The Purus? The Madeira? Tapajos? Tocantins? In what general direction do they all flow? In what direction does the Amazon flow? How many mouths has it? In what direction does the Orinoco flow? The Paraguay? What are the three largest branches of the La Plata? By what rivers could you pass from the Orinoco to the Amazon? What lake near the northern coast? On the Bolivian Plateau?

Climate.—In what zone is all of South America north of Cape Frio and the Desert of Atacama? Through what river-valley does the equator pass? What kind of climate, then, is found in most of South America? In the most southern portion?

Productions.—What minerals are found among the Andes? Where is the diamond region of South America? On what part of the coast is nitre found? Where is guano found? (*Guano, in the abundance and quality of which Peru surpasses all the world, is extensively used as an agricultural manure. The Lobos Islands are covered with it.*)

Name some of the vegetable productions of the Valley of the Amazon. Where do you find cinchona? Wheat? What are some of the vegetable products of the Brazilian Highland? Where do you find the mandioc? How is it used? Ans. *From its root tapioca is made. The root contains a poison which is readily removed by the use of fire. The Indians of South America depend upon the mandioc very largely for food.* Where is India-rubber found? What is it? Ans. *The sap of the caoutchouc tree. The trees are tapped and the sap collected.*

Animals.—What animals abound on the Pampas? Where is the condor found? The armadillo? The sloth? For what shell-fish is Guayaquil famed? Ans. *The waters and shores of the Guayaquil River, since there is no winter to freeze or to chill, are very prolific. The branches which hang in the river are often loaded with oysters, which cling to them as they do to the rocks. Hence it is said that in Guayaquil "oysters grow on trees."*

What curious fish in the Orinoco? What dangerous animal in the Amazon Valley? What sea-bird in the South Atlantic? What bird belongs to the southern extremity of the continent?

SOUTH AMERICA
PHYSICAL MAP
SCALE OF MILES
Longitude West from Greenwich
WEST INDIES
CARIBBEAN SEA
CENTRAL AMERICA
NORTH EQUATORIAL CURRENT
HIGHLAND OF GUIANA
SELVAS
GREAT FOREST
HIGHLAND OF BRAZIL
RAINLESS COAST
EQUATORIAL CURRENT
CONNECTING SOUTHERN CURRENT
PACIFIC OCEAN
ATLANTIC OCEAN
Wild Horses, Cattle, Pigs

XLIX. GENERAL DESCRIPTION.

1. South America is triangular in shape. It lies partly in both hemispheres; but by far the larger portion of it is in the southern hemisphere.

2. **Surface.** The surface of the continent is naturally divided into four regions: I. The Andean Plateau; II. The Highland of Brazil; III. The Highland of Guiana; IV. The Great Central Plain.

3. **Andean Plateau.** The Andes skirt the shores of the Pacific all the way from Patagonia to Panama.

They consist of parallel ranges called Cordilleras, of which the two most important are known as the Cordillera of the Coast, and the Cordillera of the Interior.

Between these are elevated plateaus, the highest of which is the Plateau of Bolivia.

All the way from the Strait of Magellan up to the Isthmus of Panama, there is, arranged along the tops of the Andes, like a line of sentinels, a succession of snow-capped volcanoes, all higher than the highest peak in North America. Some of them reach the height of about 25,000 feet.

4. **The Highland of Brazil** extends from the La Plata northward, nearly to the Amazon. It is traversed by parallel ranges of mountains, some of which are from 5,000 to 8,000 feet high.

5. **The Highland of Guiana** rises abruptly from the plain between the Orinoco and the Amazon.

6. **The Great Central Plain** consists of the valleys of the Orinoco, the Amazon, and the La Plata.

The elevations which separate the head waters of these streams are so low, that the three valleys may be considered as forming one basin.

So that, with trifling exceptions, all the rain that falls on the continent finds its way back to the sea through the Amazon, the La Plata, and the Orinoco.

Different portions of the Great Central Plain are called Pampas, Selvas, and Llanos.

WAX PALM.

Pampas. The vast plains of the La Plata are known as Pampas. They resemble our prairies.

During the wet season they are clothed with a rich growth of tall grass, and clumps of thistles ten or fifteen feet high; but the long summer droughts destroy the vegetation, and these pampas become arid wastes.

Selvas. The Selvas are densely wooded plains occupying a large part of the valley of the Amazon.

The vegetation here is of the most remarkable and luxuriant description. The trees are of gigantic growth and endless variety.

Air plants and climbing vines of the most fantastic shapes, with leaves of extraordinary beauty, and the most brilliant and curious flowers, hang from the branches and festoon the forests.

Among the trees are the India rubber tree, the breadfruit, the cow-tree, and palms in great variety, among them the wax palm, from which valuable wax is obtained.

MAP STUDIES.

POLITICAL SOUTH AMERICA.

Countries.	Area in Sq. Miles.	Population.	Countries.	Area in Sq. Miles.	Population.
Empire of Brazil	3,287,964	9,448,233	*Republics.*		
The Guianas	178,369	305,223	Peru	503,000	2,673,075
Republics.			Bolivia	842,729	2,000,000
Venezuela	403,261	1,784,194	Chili	132,606	2,068,447
United States of Colombia	504,773	2,913,343	Argentine Republic	892,000	1,766,922
Ecuador	248,372	1,066,137	Paraguay	57,300	239,544
			Uruguay	73,538	450,000

General Questions.—What country occupies most of the eastern portion of South America? The southern? Two States east of this? What countries are traversed by the Andes? What border on the Caribbean Sea?

Brazil.—What is the only country of South America that does not touch Brazil? What great river drains a large part of Brazil? How near the Pacific is its source? Through how many degrees of longitude does it flow? What is the direction of its principal tributaries? What two rivers have their source near the town of Diamantina? What do you judge from the fact that one flows north and the other south? What is the general direction of the rivers of Southern Brazil? What river enters the Atlantic south of Cape St. Augustin? What portion of Brazil is mountainous? Where is Rio? Bahia? Pernambuco? Para? Maranham?

Guiana.—To what nations do the Guianas belong? What are their capitals?

Venezuela.—What countries adjoin Venezuela on the east? South? West? Sea on the north? Name its great river. How many mouths has it? What lake in the north-west? Island off the mouths of the Orinoco? Capital? Town on the coast? City on the Orinoco? Where is Maracaybo?

Colombia.—What countries adjoin Colombia? What sea to the north? What cape forms the northern extremity? What isthmus does it contain? What two ports on opposite sides of the isthmus? Where is Cartagena? Popayan? Savanilla? What is the capital?

Ecuador.—Bound Ecuador. What circle crosses it? Name its volcanoes. Gulf off the coast? Cape north of the equator? Chief city? Seaport?

Peru.—Bound Peru. What cape and point on the coast? Islands off the coast? What rivers traverse Peru? Where is Lake Titicaca? Cuzco? Lima?

Bolivia.—Bound Bolivia. Desert near the coast? Name some of the rivers. Where is La Paz? Sucre? Mt. Sorata? Mt. Illimani?

Chili.—Bound Chili. In what zone is it? On which side of the Andes is it? Where is Valparaiso? Santiago? Where is the island of San Juan Fernandez? Name two islands off the southern coast.

Argentine Republic.—Bound the Argentine Republic. What river drains it? Name some of its chief tributaries. Where is the Strait of Magellan? Tierra del Fuego? Patagonia? Cape Blanco? Cape Corrientes? Cape San Antonio? Buenos Ayres? Rosario? Cordova? Mendoza? Tucuman?

Paraguay.—Bound Paraguay. What is the capital?

Uruguay.—Bound Uruguay. Cape on the coast? What is the capital?

SOUTH AMERICA
POLITICAL MAP
SCALE OF MILES
WEST INDIES
CARIBBEAN SEA
ATLANTIC OCEAN
PACIFIC OCEAN
CENTRAL AMERICA
UNITED STATES OF COLOMBIA
ECUADOR
BRAZIL
BOLIVIA
PARAGUAY
ARGENTINE REPUBLIC
ARGENTINA
PATAGONIA
Maranham
Pernambuco
Bahia
Valparaiso
Rosario
Buenos Aires
Port Stanley
Strait of Magellan
Cape Horn
Longitude
West from
Greenwich
Equator
Tropic of Capricorn
Tropic of Cancer
Long. 3 W. 8 East 7 from 11 Washington 12
STRAIT OF MAGELLAN
ISTHMUS OF PANAMA
CARIBBEAN SEA
PACIFIC OCEAN
Aspinwall
Panama

Llanos.—The Llanos (*lyah nos*), or treeless plains of the Orinoco, extend from the shores of the Caribbean Sea to the foot of the mountains.

In the rainy season, a vast extent of these plains is overflowed, and becomes like the borders of the Lower Nile, a boundless sea. After the flood subsides, the most luxuriant growth of grass and flowers appears.

In the dry season the verdant plains become barren wastes.

7. **Rivers.**—The three great rivers, the Amazon, the La Plata, and the Orinoco, with their tributaries, include nearly all the large streams of South America, and constitute the grandest system of irrigation on the globe.

The Amazon is one of the longest and largest rivers in the world. It rises in Lake Lauricocha, on the top of the Andes, and flows across the continent. Its length is upwards of 3,700 miles.

In some places, even far away from the sea, it is so broad that a vessel sailing upon it may be out of sight of land.

The Amazon drains a larger area and discharges more water into the ocean than any other river. Its current is perceived 200 miles out at sea; while the tide is felt 400 miles up its channel.

Sometimes the tide, instead of taking six hours to come in, occupies only a few minutes. This causes what is called the *bore*. A mass of water 12 or 15 feet high rolls up the stream with a roar that is heard at the distance of 5 or 6 miles.

Several of the tributaries of the Amazon are each about 1,000 miles in length.

The La Plata is the Mississippi of South America. Its course, unlike that of the Amazon, is not along parallels of latitude, but, like that of the Mississippi, across them.

From north to south the La Plata, with its tributaries, the Paraguay and Parana, traverses 23 degrees of latitude. It drains the southern portion of the Great Plain.

The Orinoco with its tributaries flows through the northern portion of the Great Plain, and drains the mountain region of Guiana.

This river is connected with the Amazon by the forks of the Cassiquiare, so that an Indian in his canoe may pass from the Amazon to the Orinoco.

On the western side of the Andes, all the way from Patagonia to Panama, the rivers are small in volume and short in course.

The mountains are too near the coast to allow the drainage to gather into large streams.

Questions.—1. What is the shape of South America? 2. Give features of surface. 3. What is said of the Andes? Of their plateaus? Of the volcanoes? 4. The Highland of Brazil? 5. The Highland of Guiana? 6. The Great Central Plain? Pampas? Selvas? Llanos? 7. What are the great rivers of South America? What is said of the Amazon? What is the bore? Describe the La Plata. The Orinoco. How is the river connected with the Amazon? What can you say of the rivers on the western side of the Andes?

I. CLIMATE, PRODUCTIONS, INHABITANTS.

1. **Climate.**—The larger part of South America lies within the tropics.

The lowlands have a hot climate. On the plateaus the temperature depends upon height above the sea-level.

Thus, a traveller ascending the Amazon would leave the hot climate of the low plain, and find in the valley of the Ucayale (*oo-cī-ah'lay*) a spring climate all the year long. Climbing the next step and passing on into the valley of the Huallaga (*hwal-yah gah*), a cooler climate still would await him. Ascending thence into the valley of the Upper Amazon, he would find himself in a superb wheat, corn, cattle, hemp and tobacco country, with cool nights, rare frost, bright skies, and pleasant days at all seasons. Still higher up he would enter, at the height of 16,000 feet, the region of perpetual snow.

South of the Tropic of Capricorn the climate is temperate. The extreme southern portion of the continent is very cold.

2. **Moisture.**—The north-east and south-east trade-winds, which come from the sea, are laden with moisture when they reach the land. As they pass on into the interior, they ascend the eastern slope of the Andes.

In their ascent they get cooler and cooler, and as they cool they drop down their moisture in the shape of rain or snow. Crossing the snowy heights of the Cordilleras, they finally reach the western slopes completely robbed of moisture. Those western slopes are consequently rainless.

Every drop of water has been wrung from the winds while crossing the Andes, and we see it returning back eastwardly to the sea in the shape of mountain streams and majestic watercourses.

The eastern slopes of the Andes, therefore, are clothed with trees and verdure. The western slopes, for nearly 2,000 miles, in Peru, Bolivia, and part of Chili, are parched and barren.

Thus we observe the physical relations between mountains and rivers, shore-lines and winds.

Had the Andes been placed by the Creator on the east instead of along the west coast, the whole of tropical South America to the westward of them would have been an arid desert.

Had they been placed west to east and west, instead of north and south, there would have been no Amazon; and the physical aspects of this beautiful country would have been quite different from what they are.

3. **Minerals.**—South America is probably the richest mineral region of the globe.

Gold and silver, precious stones, and the baser metals abound.

4. **Productions.**—All the great agricultural productions of the world may be cultivated within the tropical parts of South America.

Cotton, sugar, tobacco, cocoa, coffee, the banana, rice, the manihot (from whose root tapioca is prepared), spices, indigo, dye-stuffs, and ornamental woods abound in this favored country.

The great plains furnish pasturage for countless herds of cattle and horses.

5. **Inhabitants.**—The native inhabitants of South America are Indians. They occupy a large part of the continent. Many of them are still in a savage state.

A great number of the present population are descended from European settlers, or are of mixed descent.

The people of Brazil are chiefly of Portuguese descent, and speak Portuguese. In nearly all the other countries of South America the inhabitants are of Spanish origin and speak Spanish.

Questions.—1. What is said of the climate within the tropical portion of South America? In ascending the Amazon and its upper tributaries, what changes of climate would you experience? What climate has the southern part of the continent? The extremity? 2. What winds bring rain to South America? How are these winds deprived of their moisture? How does this moisture return to the sea? What is the effect upon the eastern slopes? Upon the western? Suppose the Andes had been placed along the east coast instead of the west, what would have been the consequence? Suppose they had been placed so as to lie east and west, what would have been the effect? 3. What is said of South America as a mineral region? 4. Name chief productions. 5. What is said of the present inhabitants of South America? Where is Portuguese spoken? Spanish?

LI. BRAZIL, GUIANAS, VENEZUELA.

1. Brazil.—The chief magistrate of the Empire of Brazil is the only ruler in America that wears a crown. The government is a limited monarchy.

This empire lies between the parallels of 4° north latitude and 32° south.

The northern portion occupies the greater part of the Valley of the Amazon, and includes the *selvas*. The central and southern portions are table-land.

The Amazon, or "King of Rivers," as the Indians call it, drains most of the country.

2. Productions.—The mines of Brazil are among the richest in the world.

Diamonds, emeralds, and rubies, gold, quicksilver, copper, and iron abound.

The diamond fields of Diamantina have given this province its name.

Coffee is the leading agricultural production.

Three-fourths of the world's supply are produced in Brazil.

The United States is the principal consumer of "Rio" coffee.

Cotton, sugar, indigo, and tapioca are important articles of cultivation and export.

In the production of sugar Brazil ranks second only to Cuba.

The forests of Brazil furnish our chief supplies of India-rubber, and yield large quantities of timber, spices, nuts, and drugs.

Cattle are raised chiefly for their hides, hides, and tallow; large quantities of which are exported.

Brazil abounds in birds of the most beautiful plumage and insects of the most brilliant tissues. The catching of them, for ornamental work, is a special branch of industry. The feather-work from the convents of Brazil is famed for its elegance.

3. Pursuits.—The principal industries are agriculture, grazing, and mining.

Brazil has a large and growing trade, chiefly with the United States and Great Britain.

Steamers ply between Para, at the mouth of the Amazon, and Nauta, in Peru, a distance of 1,900 miles, and between Cuyaba and Buenos Ayres. Brazil has 22 lines of railroad. It is connected with Portugal and the United States by ocean telegraphs.

4. Discovery.—Brazil was accidentally discovered by Cabral, a Portuguese navigator, in the year 1500.

He was bound to India, and, much against his will, was drifted to the westward by the trade-wind, and reached the shores of South America near Cape St. Roque. Owing to this circumstance Brazil became a Portuguese possession, and was colonized by Portugal.

5. People and Religion.—The inhabitants are of different races—whites, Indians, and negroes. The language is Portuguese, and the religion, Roman Catholic. Other religions are tolerated.

6. Cities.—Rio de Janeiro (generally called Rio) is the capital, and the largest city in the Southern Hemisphere.

It has an unrivalled harbor, and is the greatest coffee market in the world.

Bahia, Pernambuco, and Para are important commercial cities.

STREET SCENE IN RIO.

7. The Guianas.—These three provinces belong respectively to the English, French, and Dutch. They are the only portions of South America now dependent upon any European power.

8. The scenery is wonderfully picturesque.

A succession of long flat-topped mountains rise abruptly from the plain, with precipitous sides like walls of masonry. Mt. Roraima is the most remarkable. It is 18 miles long and 7 000 feet high.

In this region the rainfall is greater than in any other part of the world except India.

The rivers, dashing down the mountain sides, form beautiful cascades and water-falls. The Great Kaieteur Water-fall makes a single leap of 822 feet.

The coast country is low, flat, and swampy.

9. The air is filled with insects; the forests teem with wild dogs, tiger-cats, and armadilloes; the tree-tops are lively with songsters, and noisy with howling monkeys.

10. Towns.—The capitals are the largest towns. Georgetown is the capital of British Guiana, and Paramaribo the capital of Dutch Guiana. These are the centres of trade. Cayenne (from which we get cayenne pepper) is the capital of French Guiana.

Coffee, sugar, and the products of the forest are the exports.

11. Venezuela.—Venezuela is about twice the size of California.

The early Spanish explorers, observing that the natives had built their houses on piles along the shores, called the country Venezuela, or "Little Venice."

12. Surface.—The north-west and south-east portions of Venezuela are mountainous. More than two-thirds of the country, however, consist of llanos (*grassy plains*), upon which immense herds of cattle feed.

The country is traversed by the Orinoco.

13. Productions.—Among the mountains are rich deposits of gold and copper. Great quantities of salt are gathered from the shallow lagoons on the shore.

The leading agricultural productions are coffee, sugar, cocoa, tobacco, cotton, and indigo.

The flora of Venezuela is wonderfully rich and varied.

A species of mimosa, or sensitive plant, grows wild, which spreads out its umbrella-shaped top until it attains the enormous proportions of several hundred feet in circumference. The "cow-tree" is also found; the natives tap it and draw from it a milk-like beverage.

The chief exports are coffee, copper ore, and cattle products.

Five lines of steamers ply between Venezuela and the ports of Europe.

14. Cities.—Caracas, the capital, is subject to earthquakes. It was nearly destroyed by one in 1812.

It stands on the sea-shore, 3,000 feet above the water, and immediately in the rear is the "Silla" (*the saddle*), a mountain with two peaks rising to the height of 8,600 feet. These peaks may be seen many miles out at sea, and are well-known landmarks to the navigator.

Maracaybo and Angostura are important centres of trade.

Pitch and petroleum have been here cast up in such quantities as to form a lake. The "Lantern of Maracaybo" is a volcano lit up with the petroleum. It serves as a light-house for mariners.

Questions. 1. What is the form of government in Brazil? Describe the surface. How is the country drained? 2. What are the mineral products? What is said of the coffee of Brazil? Other agricultural products? Sugar? What do the forests yield? For what are cattle chiefly raised? What of the birds and insects? 3. Principal parents? Commercial facilities? 4. Discovery? 5. People and religion? 6. Rio? Bahia? Pernambuco? Para? 7. To what powers do the Guianas belong? 8. Their scenery? Water-falls? The coast country? 9. What is said of the animal life? 10. Towns? What do we get from French Guiana? Chief exports? 11. What is the size of Venezuela? Why so called? 12. What of the surface? Great river? 13. The mineral products? The agricultural? What is said of the flora? Name the chief exports. 14. What is said of Caracas? What curious mountain near it? Maracaybo? Angostura? The Lantern of Maracaybo?

LII. THE ANDEAN STATES.

1. The Andean States are Colombia, Ecuador, Peru, Bolivia, and Chili.

2. Colombia, Ecuador, Peru, and Bolivia are within the Tropics, and are similar in surface, climate, and vegetation.

3. Physical Features.—These four States all lie on both sides of the Andes.

They include a narrow coast plain, a large area of mountains and table-lands, and a portion of the low forest plain at the eastern base of the mountains.

4. Climate and Vegetation.—They have every variety of climate and vegetation that can be found in other parts of the world, between the regions of eternal frost and everlasting spring.

Here, seated at the foot of a mountain, and surrounded with the luscious fruits of the tropics, one may cast his eyes up toward the snow-capped peak above him, and take in at one view the whole range of the vegetable kingdom.

5. Chili lies altogether on the western slope of the Andes, and is in the South Temperate Zone.

6. The **mineral resources** of the Andean States are unsurpassed. They resemble those of our own Pacific Highland.

7. Trade.—The Andes present a formidable barrier to communication between the people on their opposite sides.

Two railways, however, already cross these mountains. A Peruvian line connects Bolivia with the Pacific; another passes from Chili into the Argentine Republic. But transportation is in general accomplished by means of mules or llamas, and is exceedingly tedious and dangerous.

THE LLAMA.

The llama, or Peruvian sheep, is the camel of the New World. One million are employed as beasts of burden in Bolivia alone.

8. THE UNITED STATES OF COLOMBIA.—These States extend from sea to sea, and embrace the Isthmus of Panama.

This isthmus separates the waters of the Pacific from the Atlantic Ocean. A ship-canal across it would save at least 10,000 miles for vessels sailing from New York to San Francisco.

9. Productions.—Silver, gold, platinum, and precious stones abound. The emeralds are the purest in the world.

The agricultural productions of every clime may be raised in Colombia. The native products resemble those of Brazil.

The chief exports are Peruvian bark, coffee, cotton, tobacco, and India-rubber.

From Panama we get straw-hats and grass hammocks. These, with a little chocolate, are the chief manufactured exports.

10. Cities.—Bogotá, the capital, is situated 8,700 feet above the sea-level. It has two rainy seasons annually, and its climate all the year round is delightful.

Popayan, the first city built by European settlers in the western part of South America, ranks next in importance to Bogotá.

Cartagena (*car-ta-jée'na*), Aspinwall, Panama, and Savanilla are important ports.

11. ECUADOR.—Ecuador is the Spanish for *Equator*. This Republic is crossed by the Equator; hence its name.

It contains a remarkable group of volcanoes.

Among them is the dome-shaped Chimborazo, one of nature's most imposing structures, standing at the enormous elevation of four miles above the level of the sea. I have seen this mountain by moonlight at a distance of ninety miles.

Another of this wonderful array of burning mountains is the grand and terrific Cotopaxi. In its eruptions, the noise of which is said to have been heard at the distance of six hundred miles, it shoots out a column of flame half a mile high.

The condor, the largest bird of flight in the world, dwells among the rugged heights of the Andes. He feeds chiefly upon the shell-fish found on the beach of Ecuador, leaving his home, 100 miles distant, twice a day to secure his meals.

12. Productions.—Ecuador contains mines of emeralds, quicksilver, iron, and copper. Among the agricultural productions, the most important are cocoa, coffee, and wheat.

The principal exports are cocoa, coffee, Peruvian bark, vegetable ivory, and straw-hats.

"Peruvian bark" is the bark of the cinchona tree. It yields the valuable medicine, quinine. This tree is indigenous to the eastern slopes of the Andes, north of Chili, and to no other part of the world.

13. Cities.—Quito, the capital and largest city, is situated nearly two miles above the level of the sea.

No less than eleven peaks, all white with their snow caps, are in full view from the *Plaza*, or great public square of this city.

Guayaquil, the port of Quito, is the principal seaport.

The Galapagos, or Turtle Islands, so called from the gigantic tortoises found here, belong to Ecuador.

Questions.—1. Name the Andean States. 2. Which are within the Tropics? In what are they like? 3. What are their physical features? 4. Climate and vegetation? How can you take in at one view the whole range of vegetable life? 5. What Andean State is only on the western side of the Andes, and in the temperate zone? 6. What of the mineral resources of the Andean States? 7. How is trade carried on across the Andes? What of the llama? 8. How is Colombia situated? What is said of the Isthmus? The ship-canal? 9. Mineral products? Agricultural? Exports? 10. What is said of Bogotá? Popayan? Cartagena? What other ports are there? 11. Why is Ecuador so called? What can you say of Chimborazo? Of Cotopaxi? Of the condor? 12. Mineral productions? Agricultural? Exports? What is said of the cinchona tree? 13. How is Quito situated? What is its port? From what do the Galapagos Islands derive their name?

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LIII. PERU, BOLIVIA, AND CHILI.

1. PERU.—Peru has been famed from the earliest times for the almost fabulous wealth of its mines.

Silver and gold, quicksilver, copper, lead, and iron abound. The silver mines of Pasco are among the most celebrated in the world.

Not many years ago silver was used in Peru as the baser metals are with us; tires of carriage-wheels, horse-shoes, and the commonest household utensils were of solid silver. I have seen there, in the early days of the Republic, Indians sitting at dinner on the dirt floor of their hut, and eating without the aid of knife, fork, or spoon, out of a massive silver dish.

2. Rainless Region.—West of the Andes Peru is rainless.

I have seen wheat piled up on the wharves of Callao, lying there for months together in the open air, with no more protection from the weather in that rainless port, than if it had been a pile of paving stones.

The sea along this rainless coast is the most gentle part of the ocean. It is never ruffled by a storm. *Rainless shores* are washed by *stormless seas*.

Western Peru is supplied with water, both for drinking and for irrigating the fields, from the mountain streams formed by the melting snows of the Cordilleras. Cultivation depends almost entirely upon irrigation.

3. Productions.—This rainless country, wherever there is water, is like a conservatory without glass. It produces the most beautiful flowers and delicious fruits.

The cotton-plants grint, and bud and boll all the year. The tobacco-plant is here perennial. Sweet potatoes require to be planted only once in seven years; beans, once in six. They produce continuously.

The chief exports are guano and nitre. Silver ore, sugar, and the wool of the Peruvian sheep are also exported.

Peru is one of the leading South American States in the construction of railways.

Early Civilization.—When Europeans first visited South America, Peru was occupied by a highly civilized tribe of Indians. The remains of their great road from Quito to Cuzco, and thence along the plateau of the Andes into Chili, are still to be seen. This road was 1,500 miles long and 40 feet wide. In constructing it ravines were crossed by suspension bridges, and galleries were cut through the rock.

In Cuzco was the great temple of the sun, which, in its day, far surpassed in costliness of decoration any edifice in Europe.

4. Cities.—Lima, the capital, has a fine library and a noble cathedral. Its houses are built of sun-dried clay. Earthquakes have desolated it repeatedly. Callao is its port.

Cuzco is the second city of importance. Arequipa (*ar-e-ke'pah*) is the next. The great volcano of Arequipa, a truncated cone, rises on the outskirts of the city to the height of more than 20,000 feet.

AREQUIPA.

Iquique (*e-ke'kay*) exports immense quantities of nitre, of which it is said to have enough to supply the world for 1,000 years.

Pasco, nearly 14,000 feet above the sea, is the highest city in the world.

5. **BOLIVIA** was named in honor of the South American "Liberator," Bolivar.

This republic contains the highest plateaus and ridges of the Andes. It has a narrow strip of sea-coast, which forms a part of the desert of Atacama (*ah-tah-cah mah.*) East of the Andes the country is generally well watered and fertile.

Lake Titicaca is partly in Bolivia. It is nearly 13,000 feet above the level of the sea. Here the pressure of the atmosphere is greatly diminished, and evaporation is enormously active. The water is taken up from the lake as fast as the rivers pour it in. The lake is navigated by steamers.

6. Bolivia, like Peru, is rich in minerals.

The mountains abound in silver and copper; the desert lowland contains silver mines and deposits of nitre.

A peculiar product of Bolivia and Peru is the plant called *coca*.

The leaf is used by the natives of a large part of South America, somewhat as the betel-nut is used in the East Indies, and tobacco with us. It enables those who use it to endure great fatigue. It is chewed with unslaked lime, as the betel is.

The exports are copper, silver, guano, nitre, and cinchona bark.

7. **Cities.**—The most important cities are on the plateau. Several of them are connected with the Pacific by means of the Peruvian railroad across the Andes.

La Paz, the capital and largest city, manufactures hats and woollens from the fleece of the Peruvian sheep.

Cochalamba contains factories of cotton goods and glass-ware. Sucre has a university and a school of mines.

Potosi, more than 13,000 feet above the sea, is near the famous silver mines. In its palmy days, when the mines were worked, it numbered 130,000 inhabitants. At present it contains only about 20,000. The mines of Potosi have yielded silver to the amount of 1,000 million dollars.

8. **CHILI.**—Chili is a narrow strip of country lying on the western slope of the Andes, and extending to the sea.

The northern portion comes within the rainless region. It is a part of the desert of Atacama.

South of this region the rainfall is abundant. The prevailing westerly winds, coming from the Pacific, are laden with moisture which the Chilian Andes wring from them.

In Bolivia and Peru the western slopes of the Andes are *rainless* and *barren*. In Southern Chili the western slopes of the Andes are *green*, and their fertility makes Chili the granary of all South America on the Pacific Ocean.

9. **Productions.**—Chili is a mineral region. Its copper and silver mines are profitably worked. Coal is abundant, and is largely used in smelting.

About fifty years ago, an Indian being benighted in the desert of Atacama, gathered up such materials as he could find and built a fire against a rock, as he thought. In the morning he found the back of his fireplace all silver, which proved to be worth not less than $20,000. This led to the development of the mines in the vicinity of Calderа.

Chili produces the finest of wheat and the best of timber.

The chief exports are copper, silver, and wheat.

10. This republic is one of the most enterprising in South America. It has good schools, supported out of the public treasury, to which all who will may send their children.

Juan Fernandez, the scene of Robinson Crusoe's adventures, is an island in the Pacific belonging to Chili.

11. **Cities.**—Santiago, the capital, is famed for its beauty.

Valparaiso (*Vale of Paradise*), the port of Santiago, is the largest and most flourishing seaport of Spanish America.

The **Araucanian Indians** are found in the southern part of Chili. They are one of the most remarkable of uncivilized races. They believe in a Supreme Being and in the immortality of the soul. By their indomitable courage they have maintained their independence for centuries, but have of late submitted to the Chilian Government.

Questions.—1. For what is Peru famed? For what was silver once used in this country? 2. What part of Peru is rainless? Illustrate. Where do you find the most gentle part of the ocean? How is cultivation carried on in Peru? 3. What is said of the agricultural productions? Exports? How does Peru rank in the construction of railways? Who were the ancient inhabitants? Describe their great highway. Temple. 4. What is said of Lima? Cuzco? Arequipa? Iquique? Pasco? 5. Why was Bolivia so named? What is said of the elevation of Bolivia? Its sea-coast? What portion of the country is well watered? What can you say of Lake Titicaca? 6. What of the minerals? What is coca? How used? The exports? 7. Where are the most important cities? How connected with the Pacific? What is said of La Paz? Cochalamba? Sucre? Potosi? 8. How is Chili situated? What part is desert? What is said of the rainfall? What makes Central Chili the granary of South America? 9. The mineral products? Agricultural? Exports? 10. What of public education? What island belongs to Chili? 11. What is said of Santiago? Valparaiso? The Araucanian Indians?

LIV. THE LA PLATA STATES.

1. The La Plata States include the Argentine Republic, Paraguay, and Uruguay. With the exception of Patagonia, which now forms a part of the Argentine Republic, they all lie in the valley of the Rio de la Plata.

The La Plata, with the Parana and Paraguay, forms a continuous water route for the commerce of this valley. Large steamers ascend far above Asuncion, while smaller ones penetrate to Cuyaba, in the heart of Brazil.

The valley of the La Plata has one of the finest climates in the world, free from frost and remarkably healthy.

2. Like Venezuela, most of this region is a fine agricultural and grazing country.

Its soil is adapted to the cultivation of wheat, corn, coffee, tobacco, sugar, rice, cocoa, hemp, flax, indigo, and mandioc.

Great numbers of cattle feed on the grassy pampas.

The exports of the La Plata States are chiefly hides, horns, tallow, beef, wool, tobacco, and yerba mate (*mah-tay*).

3. The inhabitants are chiefly Indians and mixed races. They are Roman Catholic in religion.

The herdsmen, who live on the pampas and are called *Gauchos*, are most expert horsemen. They chase the ostrich, the wild horse, and the bullock, and throw the lasso with such precision that they can catch the animal by the foot while it is yet lifted in flight.

4. **THE ARGENTINE REPUBLIC** consists largely of the pampas.

Furious tornadoes, called *pamperos*, sweep across the pampas to the sea, and are sometimes accompanied by those fearful discharges of lightning which produce the "fulgurite." The lightning often strikes the ground. It then makes a hole in the earth and melts the sand, leaving around the hole a funnel-shaped lining of coarse glass, which is called a *fulgurite*.

The liberal policy adopted toward settlers is attracting a large immigration from Southern Europe.

This republic has more lines of railway and better educational advantages than any other State of South America.

5. Cities.—Buenos Ayres (*bwayn'os i'reys*), the capital, is also the chief city and seaport of the La Plata basin.

Thirteen lines of steamers connect it with foreign ports.

Tucuman stands in the garden spot of the Republic. Cordova, Rosario, Mendoza, and Corrientes are important towns.

Patagonia and *Tierra del Fuego* are thinly peopled. Their inhabitants are degraded savages. They are remarkable for their height. Many of them are nearly seven feet high.

Tierra del Fuego, the *land of fire*, and Cape Horn, or the *furnace cape*, are so called because of the fiery furnaces (ovens) and burning volcanoes which the discoverers fancied they saw there. Both are islands.

6. Paraguay.—Paraguay is the smallest of the South American Republics. It is the only nation in the New World without any sea-coast.

The climate and soil are adapted to the products of both tropical and temperate regions.

The chief production and export of the country is the dried leaf of a holly, which the inhabitants call yerba (*the vegetable*), and of which *maté*, or Paraguay tea, is made.

Maté is a favorite beverage in almost the whole of South America.

Asuncion is the capital.

7. Uruguay.—Uruguay borders on the Atlantic at the mouth of the La Plata. It is almost entirely a grazing region.

The capital, Montevideo, has an extensive commerce, chiefly in cattle products, both with England and the United States. The river at this point is more than 60 miles wide.

The Falkland Islands, off Cape Horn, belong to Great Britain. Their coasts teem with penguin, fish, and seals.

Questions.—1. What do the La Plata States include? Where do they lie? How far do steamers ascend the La Plata and its branches? The climate of this valley? 2. What other part of South America do these States resemble? How? What of the soil? The exports? 3. The inhabitants? What is said of the gauchos? 4. Of what does the Argentine Republic largely consist? What is said of the pampas? Describe the fulgurite. In what improvements has this State taken the lead? 5. What is said of Buenos Ayres? Tucuman? Name other important places. What is said of the people of Patagonia? Why are Tierra del Fuego and Cape Horn so called? 6. Climate and productions of Paraguay? What is maté? The capital? 7. What is said of Uruguay? The capital? Its trade? What of the Falkland Islands?

GENERAL REVIEW.

Define Geography. Shape of the earth? Diameter? Circumference? Motions? What causes day and night? What is latitude? Define equator. Parallels. Tropics and Polar Circles. What is longitude? Define meridians. Use of latitude and longitude? What causes the change of seasons? Explain equinoxes. Solstices. Name the zones. Describe them. In which one do you live?

What is a globe? A map? How is the land divided? The water? Define a mountain system. Offices of mountains. What are volcanoes? Define a plateau. What is an ocean current? A river system? A river basin? Offices of rivers?

What continents in the western hemisphere? In the eastern? What line divides the northern and southern hemispheres? Which has the greater population?

What are winds? How caused? Describe the trade-winds. Offices of winds. What is climate? Show the effect of latitude. Of elevation. Of sea winds. Effect of climate on labor. Describe vegetation and animals of each zone.

Name the different social conditions of man. Races. Principal religions. Leading occupations. Why do industries vary? Name the principal forms of government.

Name the three natural divisions of North America. Define each. What are the great rivers? Describe vegetation. Commercial advantages. Name political divisions. Give the natural divisions of the United States. Products and advantages of the Atlantic Slope. Of the Mississippi Valley. Of Pacific Highlands and Slope. How many States and Territories are there? What are the departments of the Government of the United States? Describe each. Define State government. What are the leading agricultural productions of the United States? What of its domestic commerce? Transportation routes? Foreign commerce? Exports? Imports?

Name the New England States, with capitals. Resources. Industries. In what does Maine excel? What are the chief occupations of New Hampshire? Of Vermont? For what is Massachusetts conspicuous? Rhode Island? Connecticut.

Name the Middle Atlantic States, with capitals. In what does this section surpass every other portion of the country? In what does New York rank first among the states? For what is New Jersey noted? Why? Of what three articles is Pennsylvania the largest producer? For what is Delaware famed? What mineral abound in Maryland? For what is Chesapeake Bay noted? What does the District of Columbia contain? What are the chief productions of Virginia? Of West Virginia?

Name the Southern States. Capitals. What has been the effect of inventions upon the industries of the Southern States? For what are the hills and forests of North Carolina noted? What are the natural division of Tennessee? Products of each? What is the great production of South Carolina? What is grown on the islands along the coast? For what is Georgia conspicuous? Florida? Alabama and Mississippi? What are levees? What peculiarity in the surface of Louisiana? Of what is this state the great producer? What are the productions of Arkansas? In what does Texas surpass all other States?

Name the Central States. The capitals. Chief cities. What portion of the country do these States occupy? What is their most striking feature? What may this region be called? For what is Kentucky noted? Chief industries of Ohio? Indiana? In what does Illinois rank first among the States? What are the leading products of Michigan? Of Wisconsin? What is the value of the Great Lakes to commerce? For what two products is Minnesota famed? What are the products of Missouri? Of Iowa? What are the industries of Kansas? Of Nebraska? Of Dakota?

What are the resources of the Rocky Mountain Region? Chief industry of the Plateau Region? Of what three things is California the great producer? What are the resources and industries of Oregon? Of Washington? Products of Alaska?

What are the resources of Canada? Industries? Products of Ontario? What can you say of the inhabitants of Quebec? How are the people of New Brunswick employed? What phenomenon on the shores of Nova Scotia? Exports of Nova Scotia? Resources of Manitoba? Of British Columbia? What industry is carried on near Newfoundland? For what is Labrador visited? What is exported from Greenland and Iceland?

Describe the climate and productions of Mexico. Of Central America. What are the exports of the West Indies? Of Trinidad? Turk's Islands? The Bermudas?

Name the four natural divisions of South America. Describe the pampas. Selvas. Llanos. The Amazon. La Plata. Orinoco. What can you say of the climate? Moisture? Effect of Andes? Minerals? Productions? Inhabitants?

What is the great product of Brazil? Other exports? What is said of the coastall in the Guianas? Why was Venezuela so called? Name productions.

Name the Andean States. Describe surface. What part of the United States do they resemble in mineral wealth? How is transportation carried on? Where do the best emeralds come from? For what is Ecuador noted? Peru? What portion of Peru is rainless? What are the productions? Exports of Bolivia? What does Chili produce?

Name the La Plata States. What of climate? Exports?

EUROPE.

MAP STUDIES.

PHYSICAL EUROPE.

Outline.—What ocean on the north of Europe? On the west? What great sea on the south? (*This sea, lying between Africa and Europe, is the* "Midland Sea," *medius*, middle, *terra*, land). *It is warm and tideless. In these respects it resembles the Gulf of Mexico.*) How is the Mediterranean connected with the ocean? What two seas form parts of the south-eastern boundary of Europe? How do you pass by water from the Mediterranean into the Black Sea? Do the tides affect the Black Sea? Is there any natural water route from the Mediterranean into the Caspian?

Where is the Strait of Messina? (*In the Strait of Messina are the famous rocks of Scylla and the whirlpool of Charybdis, which were the dread of ancient mariners.*) Where is the Adriatic Sea? What bay north of the Spanish Peninsula? What sea north of the Atlantic Plain? What sea separates the Scandinavian Peninsula from the Great Plain? What three gulfs connected with the Baltic? What sea indents the Arctic coast of Europe? What great ocean current bathes the western shores of Europe? What island borders on the Arctic Circle? Where are the British Isles? Name the principal islands in the Mediterranean. What is the most northerly point of Europe? Where is Cape Clear? Cape Matapan? Name the great northern peninsula of Europe. What one on the extreme south-west? South-west of the Adriatic? Ans. *Italy.* What article of wear does it resemble in form? What peninsula east of the Adriatic? Ans. *Turkey and Greece.* What peninsula between the Baltic and the North Sea?

Surface.—What portion of Europe is occupied by the Great Low Plain? Where is the Atlantic Plain? Where are the Steppes? The Black Lands? Where is the lowest portion of the continent? What mountains border the Low Plain on the north-east? What plateau on the north-west? What two ranges in this plateau? What mountains between the Caspian and the Black Seas? What mountains on the south-west of the Plain? Where are the Valdai Hills?

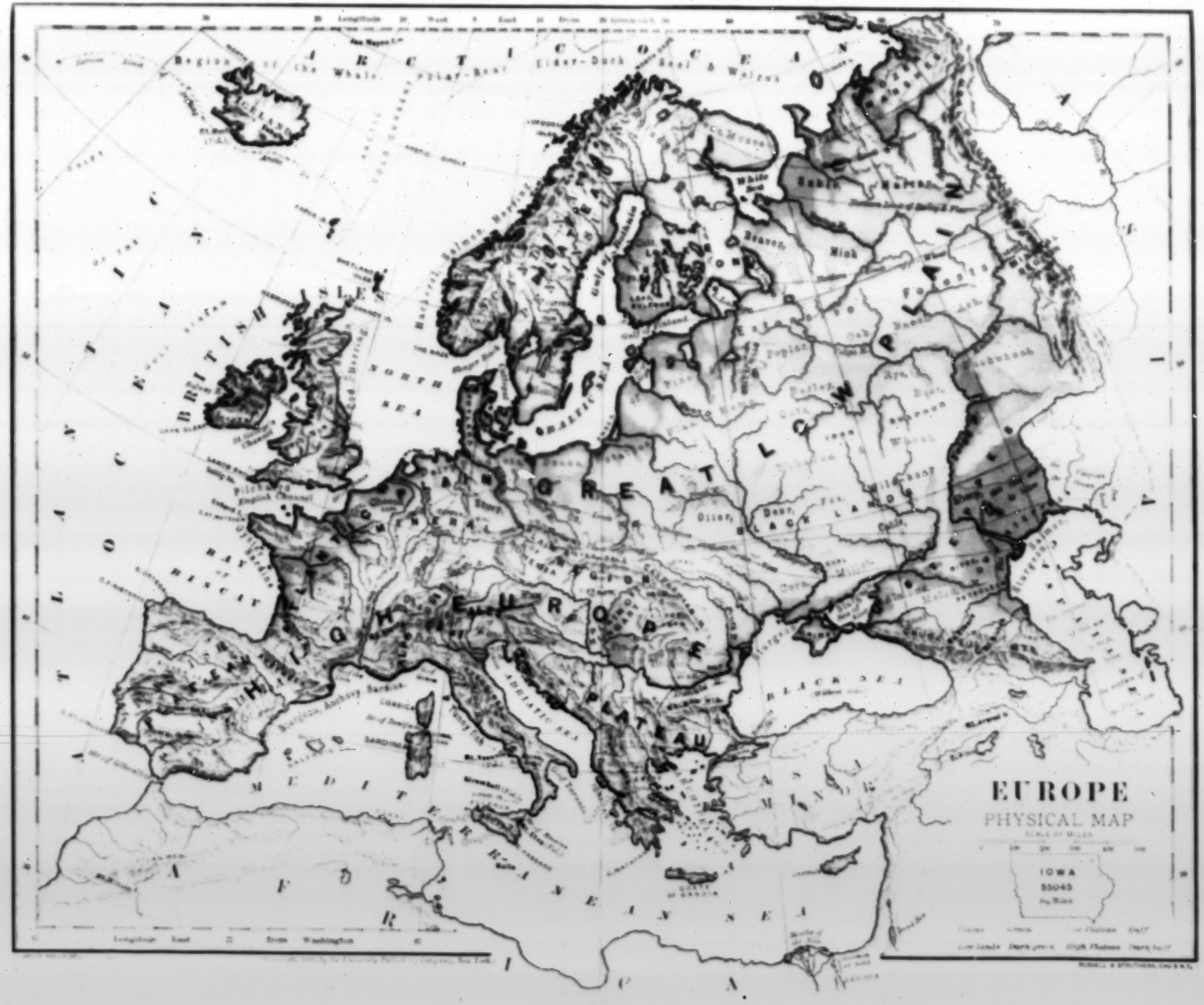
Where is High Europe? What plateau forms the south-west extremity? What mountain chain on the northern border of this plateau? In what direction do the mountain ranges of this peninsula lie? Where are the Alps? What does their color on the map show? Ans. *That they are the highest mountains of Europe.* What is the general direction of this chain? What mountains do you find in the peninsula of Italy? What mountain chains in the plateau south of the Danube? Where is Mt. Blanc? Where do you find volcanoes? Geysers? What plain between the Danube and the Carpathians?

Rivers and Lakes.—What river forms part of the eastern boundary of Europe? What large river rises near the Valdai Hills and enters the Caspian? What river flows into the Sea of Azov? What river that drains the Black Lands enters the Black Sea? What river drains Central Europe and enters the Black Sea? What river enters the Adriatic Sea? What river flows from the Apennines into the Mediterranean? What river enters the Gulf of the Lion? In what two directions do the rivers of the Spanish Plateau flow? In what general direction do the rivers of the Atlantic Plain flow? Into what do the Ob'er and Vistula flow? What river enters the Gulf of Riga? What important one flows into the White Sea? What one into the Arctic Ocean?

Minerals.—What minerals in the mineral region of Central Europe? Among the Ural Mountains? Caucasus? Carpathians? Apennines? In Sicily? The Spanish Peninsula? British Islands? Scandinavian Peninsula? Where is amber found? Petroleum? Quicksilver?

Vegetation and Animals.—What do you find on the shores of the Arctic Ocean? Where is the northern limit of wheat? Of the vine? Of maize? In what parts of the British Isles does wheat not mature? Where does tobacco grow? The almond? Olive? Fig? Orange and lemon? Grape? The mulberry? Currant?

In what waters are found the whale? The sturgeon? The salmon? The sardine? Coral? What fish near the British Isles? The Scandinavian Peninsula? What region contains fur-bearing animals? Where in Europe does the camel live? What animals live on the Arctic shores?


EUROPE
PHYSICAL MAP
IOWA
55045
Sq. Miles
ARCTIC OCEAN
Region of the Whale
Polar-Bear
Eider-Duck
Seal & Walrus
ICELAND
BRITISH ISLES
NORTH SEA
BAY OF BISCAY
GREAT LOW PLAIN
HIGH EUROPE
PLATEAU
BLACK SEA
ADRIATIC SEA
MEDITERRANEAN SEA
AFRICA
ASIA MINOR
Longitude East from Washington

POLITICAL EUROPE.

Countries	Area in Sq. Miles	Population	Countries	Area in Sq. Miles	Population	Countries	Area in Sq. Miles	Population
England and Wales	58,320	22,712,266	Italy	114,292	26,801,154	*Bavaria*	29,292	5,024,832
Scotland	30,685	3,360,018	Greece	19,343	1,457,894	*Wurtemberg*	7,675	1,881,505
Ireland	31,974	5,411,416	Turkey in Europe	62,028	4,275,000	*Saxony*	6,777	2,785,342
Russia in Europe	2,201,617	75,251,447	Roumania	45,632	5,073,000	Netherlands	20,527	3,965,456
Norway	122,270	1,806,900	Servia	20,350	1,714,322	Belgium	11,373	5,336,185
Sweden	170,979	4,454,342	France	204,091	36,905,788	Austria	24,0[illegible]3	37,350,000
Spain	182,785	16,535,306	German Empire	208,534	42,727,360	Switzerland	15,992	2,759,754
Portugal	36,510	4,057,538	*Prussia*	137,066	25,742,403	Denmark	14,553	1,928,000

General Questions.—What country occupies a large portion of Eastern Europe? What countries occupy the three peninsulas in the Mediterranean? What three countries of Northern Europe are peninsular? What great country is insular (surrounded by water)? What are the great countries of Central Europe? What countries border on the Black Sea? The Adriatic? Which country is without sea-coast?

Russia.—Round Russia. What mountains form part of the eastern boundary? Part of the southern? What peninsula projects into the Black Sea? Where is Finland? Lapland? What sea is shut in by the Crimea? What sea shut in by Lapland? Where is the vault of Finland? Of Riga? What islands north of Russia? Where does the Volga rise? Into what does it flow? Where does the Kama rise, and into what does it flow? Into what does the Don flow? Dnieper? Dniester? Vistula? Dwina? Onega? Petchora? Where is Lake Ladoga? Lake Onega? What is the capital? Where is it? Ans. *Upon the small river Neva, which drains Lake Ladoga into the Gulf of Finland.* Where is Cronstadt? Ans. *At the mouth of the Neva. It is a strong fortification which commands the passage up to St. Petersburg.* Where is Moscow? On what river is Warsaw? Saratow? Nijni-Novgorod? Kazan? Where is Archangel? Astrakhan? Odessa? Tula? Kief? Kischenef?

Norway and Sweden.—What peninsula do these countries occupy? Round it. Where is the Gulf of Bothnia? The Baltic Sea? The Cattegat? Skager Rack? What islands off the coast of Norway? Where is the North Cape? The Naze? Where are Lakes Wener and Wetter? What is the capital? Where is Christiania? Carlscrona? Gottenburg? Bergen? Hammerfest?

Portugal.—Round Portugal. Where is Cape St. Vincent? What are the three chief rivers? Name the capital. On what river? Where is Oporto?

Spain.—What bay and country on the north? Sea on the east and south? Ocean on the west? What mountains separate Spain from France? What strait separates Spain from Africa? What mountains along the northern coast? What mountains along the southern coast? Name the rivers that flow into the Atlantic. What river flows into the Mediterranean? What islands off the coast to which? Name the capital. Where is Seville? Valencia? Barcelona? Saragossa? Malaga? Cadiz? Almaden? Palos? The Republic of Andorra? Gibraltar? To what power does it belong? Ans. *Great Britain.*

Italy.—What mountains on the north? Sea on the east? West? South? Where is Sicily? Sardinia? What small island between Italy and Corsica? Where is Cape Passero? Gulf of Taranto? Gulf of Venice? Of Genoa? Where is the River Po? Tiber? What famous city on the Tiber? Where is Turin? Naples? Milan? Venice? Genoa? Florence? Palermo? What volcano near Naples? What volcano in Sicily? What volcano north of Sicily? What island south of Sicily? To what power does it belong?

Greece.—What sea on the east, west, and south? What country on the north? What islands east? Ans. *The Archipelago.* What islands on the west? What large island on the south? Where is Cape Matapan? What is the capital? Where is Corinth? Syra?

Turkey in Europe.—What countries on the north? Sea to the east? Country and sea on the south? What waters on the west? What mountains form part of the northern boundary? What islands south of the Archipelago belonging to Turkey? What is the capital? Where? Where is Adrianople? Salonica?

Servia, Roumania, Bulgaria, Montenegro.—Round these States. To what country did they formerly belong? Ans. *Turkey.* What river separates Bulgaria and Roumania? Where is Belgrade? Bucharest? Sophia? Cettinje?

Routes of Travel.—On what bodies of water would you pass in going from Liverpool to Suez on the Red Sea? From Queenstown to London? St. Petersburg to London? Odessa to Marseilles? Naples to Alexandria? Athens to Belgrade? London to Cologne? London to Marseilles? Odessa to Lyons? Hammerfest to St. Petersburg? Archangel to Hamburg? Venice to Alexandria?

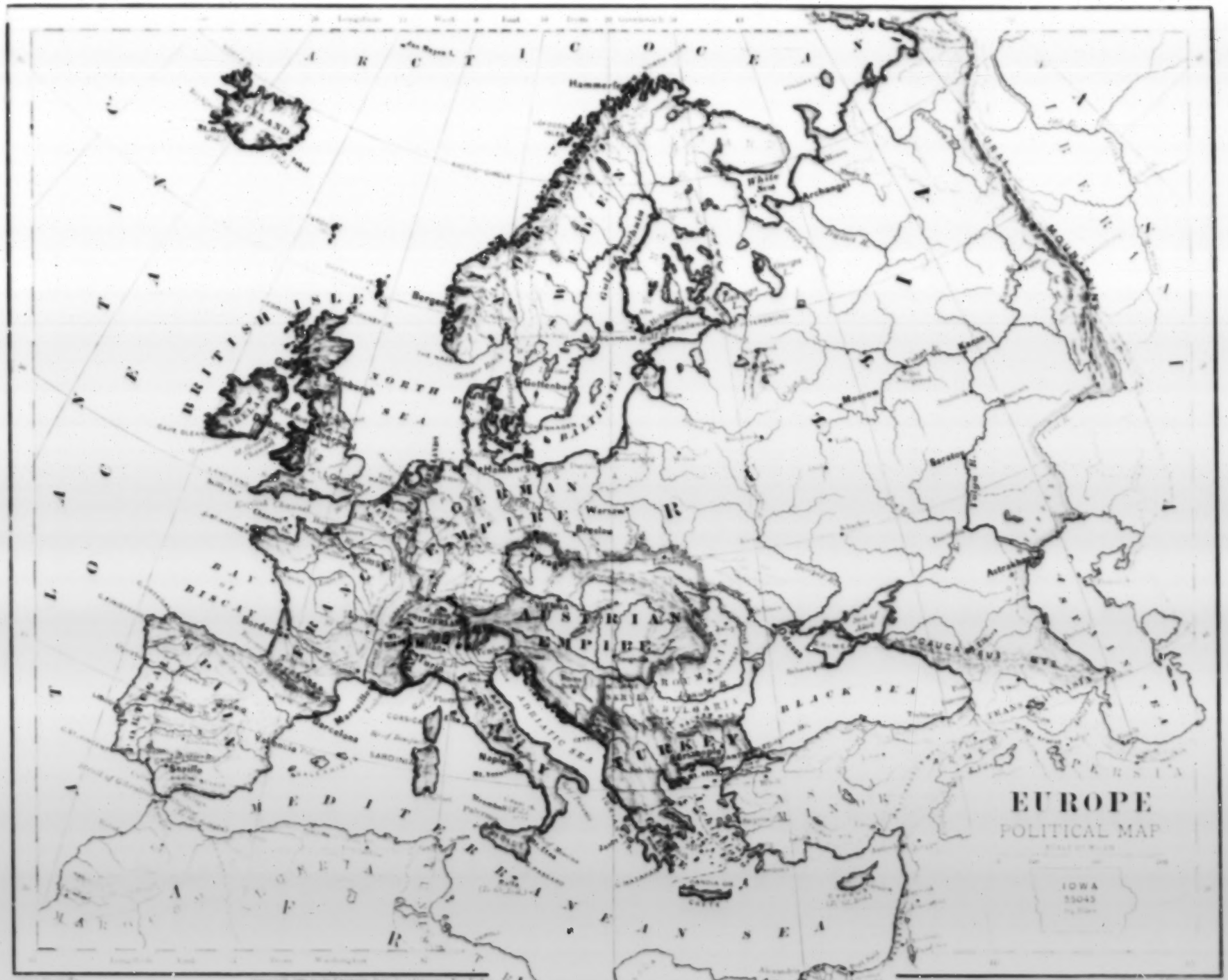
1. Europe is the smallest of the continents, and lies chiefly in the Temperate Zone. It is deeply indented by arms of the sea, and has therefore great facilities for commerce.

The peninsulas of Greece, Italy, and Spain project from its southern edge; and the Scandinavian peninsula from the northern.

2. Surface.—Europe consists of two great natural divisions—a mountain region in the south-west, and a low plain in the north-east.

3. The Mountain Region, or High Europe.—The principal mountain ranges are the Alps and the Pyrenees on the west; the Balkans and Carpathians on the east. The Ural and the Caucasus form portions of the boundary lines.

The Alps are the highest mountains in Europe.


EUROPE
POLITICAL MAP
IOWA
55045
ARCTIC OCEAN
ICELAND
BRITISH ISLES
NORTH SEA
BALTIC SEA
GERMAN EMPIRE
AUSTRIAN EMPIRE
BAY OF BISCAY
ADRIATIC SEA
BLACK SEA
TURKEY
MEDITERRANEAN SEA
Hammerfest
Bergen
Gottenburg
Hamburg
Warsaw
Breslau
Prague
Bordeaux
Marseilles
Barcelona
Valencia
Sevilla
Naples
Rome
Sarajevo
Odessa
Astrakhan
Moscow
Kazan
Saratov
Archangel
White Sea
URAL MOUNTAINS
CAUCASUS MTS
PERSIA
ASIA MINOR
CYPRUS
CRETE
AFRICA
EGYPT
MOROCCO
ALGERIA
TRIPOLI

and are celebrated for their snow-clad peaks, beautiful lakes, and glaciers.

4. **The Great Plain**, or lowland, extends from the Ural Mountains westward to the Bay of Biscay, and from the Arctic Ocean southward to the Black Sea.

Russia constitutes a large portion of it. That part of it which borders on the North Sea and Bay of Biscay may be designated the Atlantic Plain.

5. **Rivers**.—The rivers of Europe do not compare in magnitude with those of the New World.

The magnitude of rivers is largely determined by the mountain ranges.

The Danube, the Rhine, the Rhone, and the Po, rise in the Alps and flow into the Black Sea, the North Sea, the Mediterranean, and the Adriatic.

The principal rivers of the great plain have their origin around the Valdai Hills.

The Volga is the longest river in Europe (2,300 miles).

6. **Climate**.—Stretching from the heated waters of the Mediterranean up to the frozen ocean of the north, Europe has every variety of climate, except that of equatorial lands.

Western Europe, from the North Cape to the Strait of Gibraltar, has a milder climate than Eastern Europe, and, indeed, than any other part of the world in the same latitude.

This is owing to the influence of the Gulf Stream and the warm sea-winds from the south-west.

The climate of Southern Europe is tempered by the tepid waters of the Mediterranean, and the hot winds from the Sahara. Its summers are long and its winters mild and short.

7. **Minerals**.—The mountainous portions of Europe are rich in minerals. Coal, iron, and salt, lead, tin, zinc, copper, and quicksilver abound.

8. **Vegetation**.—Southern Europe is the land of the vine and the fig, the olive, the lemon, the orange, rice, and other tropical grains.

In Central Europe, between the Alps and the Valdai Hills, are found the deciduous trees of the temperate zones, the grains, and the products of the orchard.

In Northern Europe we find forests of pine, fir, and spruce, and the hardy grains, with the dwarfed plants, mosses, and lichens which belong to the Arctic region.

9. **Animals**.—The domestic animals common in our own country are found in nearly all parts of Europe.

10. **Contrasts with America**.—Unlike America, Europe is an old country; its nationalities count their ages by centuries.

Its resources are well developed and it overflows with population. It contains more than seven times as many inhabitants as the United States, and more than twenty times as many as Brazil.

In Europe, land is dear and labor abundant.

In America, land is cheap and labor scarce.

11. **Inhabitants**.—The inhabitants of Europe, in the main, are Caucasians. They may be classified as belonging to three great families, the Teutonic, the Latin, and Slavonic.

Central and Northern Europe are occupied by the first; the Latins are found in the south; the Slavonians in the east.

The Turks, Hungarians, Lapps, and Finns belong to the Mongolian race.

Questions.—1. How does Europe compare in size with the other continents? What gives it great facilities for commerce? What is said of its peninsulas? 2. Surface? 3. What are the principal mountain ranges? What is said of the Alps? What are glaciers? 4. Describe the Great Plain. What country constitutes a large part of it? What part is called the Atlantic Plain? What line will divide Low Europe from High? 5. How do the rivers of Europe and the New World compare in magnitude? In what directions do the mountain ranges of Europe lie? Do they divide Europe into many or few river-basins? How is it in the New World? Principal rivers of Europe? Where do the rivers of the Great Plain rise? What is said of the Volga? (other important rivers?) 6. What varieties of climate has Europe? Why is the western side milder than the eastern? Compare the climates of Hammerfest and of the Gulf of Finland. Compare the British Isles and Labrador. What is said of the climate of Southern Europe? 7. What is said of the minerals of Europe? 8. Describe vegetation of Southern Europe. Central. Northern. 9. What is said of the animals? 10. Contrasts with America. 11. To what families do the inhabitants belong?

GREAT BRITAIN AND IRELAND.

LVI. DESCRIPTION.

1. The United Kingdom of Great Britain and Ireland consists of two principal islands and a number of smaller ones in the adjacent waters.

The island of Great Britain includes England, Scotland, and Wales.

Ireland and Scotland are each in size about equal to Maine, Wales to Massachusetts, and England to Alabama.

2. **Domain.**—This small country has established her colonies so widely that the sun never sets upon them.

She rules one-seventh of all the people, and owns one-sixth of all the land in the world.

The following are her most important foreign possessions:

In Europe.—Malta, Cyprus, Gibraltar.

In Asia.—British India, British Burmah, Ceylon, Hong Kong, Andaman Is., Singapore, Aden.

In Africa.—Sierra Leone, Cape Colony, Natal, Transvaal, St. Helena, Mauritius.

In Oceania.—Australia, Tasmania, New Zealand, Fejee Islands.

In America.—British America, Belize, Jamaica, Bahamas, Part of Lesser Antilles, British Guiana, Trinidad, Bermudas.

3. **People.**—The people are noted for enterprise, in trade, soundness in learning, and devotion to liberty. They have been leaders in the civilization of the world.

They and we have the same language, the same ideas of law and liberty.

We carry on more commerce with them, and are more closely allied by them than to any other nation. The geography of Great Britain, therefore, is almost as interesting to us as the geography of our own country.

4. **Surface.**—Scotland, Wales, and the north of England are rugged, hilly, and mountainous. The eastern part of England is lowland. Many parts of the island are exceedingly picturesque.

Among the hills of Scotland are found those beautiful lakes which history, song, and story have made so famous. Many tourists visit the Highlands and the islands off the coast to enjoy the wild and romantic scenery.

White chalky cliffs rise on the south coast of the island, near the Strait of Dover. From these England obtained the name of Albion (albus, white).

5. **Climate.** Great Britain is in the region of west winds. Its shores are bathed by the warm waters of the Gulf Stream, and consequently its winter climate is mild—milder than the winter climate of South Carolina, though London is nearly 20° north of Charleston.

The Scilly Islands have a semi-tropical climate.

In Scotland the winter winds are cold, and the nights long. In the extreme northern parts there is, at the time of the summer solstice, no night. The sun sets, but a twilight, bright enough to read by, lasts until sunrise.

6. **Mineral Wealth.**—Great Britain is rich in iron, coal, tin, copper, lead, and other minerals, which are the source of a vast mining industry.

In some places mines are worked far under the bed of the sea.

7. **Agriculture.**—The land is highly cultivated. Wheat, oats, and barley, hay, peas, hops, and the root crops are the chief agricultural productions.

THE NORTH COAST OF SCOTLAND.

The country is also well adapted to grazing, and is famous for its breeds of horses, sheep, and cattle.

8. **Manufacturing.**—Great Britain excels all other countries in the extent and variety of her manufactures.

Cotton goods, woollens, linens, and iron wares are the chief productions.

9. **Commercial Advantages.**—Certain geographical conditions, which are peculiar to Great Britain, have largely contributed to her present national greatness.

Before Vasco de Gama discovered the route to India by "doubling," or sailing round, the Cape of Good Hope, in 1497, East India commerce (which was the commerce of the world) was carried on chiefly by caravans. But after this discovery, land routes were abandoned for sea routes, and then the position of Great Britain told immensely in her favor.

She became practically the nearest point between European markets and India, and she occupied a similar position with respect to the commerce of the New World.

At the present time, more than 20,000 vessels and 200,000 seamen are engaged in her carrying trade. In addition to this, Great Britain maintains the largest navy in the world.

10. **The Government** of Great Britain is a constitutional monarchy. The crown is hereditary.

The executive power is vested in the "Cabinet," which consists of the "Ministers," or heads of the several departments of the Government.

Parliament is the legislative branch of the Government, and corresponds to our Congress. It consists of the House of Lords and the House of Commons. The members of the latter are chosen by the people. The members of the House of Lords are nobles and bishops.

11. **Religion and Education.** The majority of the people profess the Protestant religion.

The Episcopal Church is the Established Church in England; the Presbyterian in Scotland. Both are supported by taxation. The majority of the people in Ireland are Roman Catholics.

Public education is compulsory throughout the British Isles.

12. **Cities.**—London, the capital of the United Kingdom, is the largest city in the world, and the first in commercial importance.

It is situated on both banks of the Thames, and covers an area 122 sq. mi.

twice as large as the District of Columbia. It contains nearly 2,000,000 inhabitants. Parliament sits, and the Queen holds her court in London. Some of the most noted public buildings in London are the Houses of Parliament, Westminster Abbey, the Tower, and the British Museum.

Liverpool ranks next to London in commercial activity. It is the grand cotton market of the world. Manchester is the chief centre of cotton manufacture.

Birmingham is in the "Black Country"—so called from the number of its coal and iron mines. It is the great iron mart of England.

Leeds is widely known for its woollens; Nottingham for its laces and hosiery; and Newcastle for its coal trade, glass bottles, and chemicals.

Sheffield is celebrated for its cutlery and steel, and plated ware.

Portsmouth and Chatham are among the chief naval stations.

The Universities of Oxford and Cambridge are celebrated seats of learning.

Glasgow, the chief manufacturing centre, is the largest city in Scotland, and the second largest in Great Britain.

It manufactures largely cotton goods, and builds iron vessels and marine engines. The largest chemical works in the world are here.

Edinburgh, on account of its institutions of learning and its eminent men, is the most illustrious city in Scotland.

Dundee is extensively engaged in the manufacture of linens, and Paisley in the manufacture of shawls and carpets.

Inverness stands at the northern terminus of the Caledonian Canal, which makes a safer route from the Atlantic to the German Ocean.

Merthyr-Tydvil and Swansea are the largest towns in Wales.

13. Ireland is for the most part flat and boggy. The coast is, however, bordered by hills.

In the south-west are the far-famed lakes of Killarney.

The climate is very moist and mild, because Ireland is the first of the British isles to catch the west winds as they come from the sea with the warmth and moisture of the Gulf Stream.

It rains three-fourths of the year, and the fields, even in winter, are always green. For this reason Ireland is called the "Emerald Isle."

14. Productions.—Ireland lacks the mineral resources of Great Britain. Coal is wanting and peat is often used for fuel.

The most important crops are oats and potatoes. The latter are the chief article of food among the laboring classes. Flax is extensively grown.

Ireland is a fine stock country. The cattle find pasture even in winter.

15. Cities.—Dublin, the metropolis of Ireland, is a fine, flourishing city, with a large commerce.

Belfast manufactures more linen goods than any other city in the world.

Questions.—1. Of what does Great Britain consist? 2. What is said of the climate? Foreign possessions? 3. People. How do they resemble each other? 4. What is said of the surface? Of the hills of Scotland? How did England get the name of Albion? 5. Describe climate. Which has the colder winter climate, South Carolina or Great Britain? How do you account for this? What of the Scotch winters and summer twilight? 6. What is said of the mineral wealth? 7. Agriculture? Grazing? 8. Manufacturing? 9. How was the East India commerce anciently carried on? What discovery caused a change? How did this affect England? What is said of her carrying trade? Of her navy? 10. Describe the government. 11. Religion. 12. Describe the capital. Area and population? Name some of the noted public buildings. What is said of Liverpool? Manchester? Birmingham? Leeds? Newcastle? Nottingham? Sheffield? Portsmouth? Name the great universities. What is said of Glasgow? Edinburgh? Dundee? Paisley? Caledonian Canal? Name largest towns in Wales. 13. Surface of Ireland? What lakes in the south-west? How is the climate affected by the Gulf Stream? What gives it the name Emerald Isle? 14. Productions? Chief article of food? 15. What of Dublin? Belfast?

MAP STUDIES.

THE BRITISH ISLES.

General Questions.—Bound the British Isles. What three divisions occupy the largest of them? Where is Scotland? Wales?

England and Wales.—What sea on the east? Channel and strait between England and France? What waters between Great Britain and Ireland? What hills between Scotland and England? Where is Anglesey? Holyhead? Isle of Wight? Where are the Scilly Isles? Channel Islands? Where is Morecombe Bay? Cardigan Bay? Bristol Channel? The Wash? Menai Straits? *The last are crossed by suspension and tubular bridges connecting Anglesey with the mainland.* What part of England is most mountainous? Where is Mt. Snowdon?

What is the capital? On what river? Where is Liverpool? On what river? Where is Manchester? Gloucester? Portsmouth? Birmingham? Chester? Lincoln? Leeds? Bristol? Newcastle? Oxford? Cambridge? Swansea? Merthyr-Tydvil?

Scotland.—By what ocean is Scotland nearly surrounded? What channel separates it from Ireland? What sea on the east? What islands on the north? Where is the Minch? Where are the Shetland Islands (see map of Europe)? Where are the Hebrides? Staffa? For what is Staffa famed? Ans. *It contains Fingal's Cave.* What are the bays on the Scotch coast called? Ans. *Firth or Frith.* Where is the Frith of Forth? Tay? Murray Firth? Dornoch? Solway Frith? What hills in the central part of Scotland? Where is Ben Nevis? *This is the loftiest peak in Great Britain, and is about 4,400 feet high.* What canal crosses the northern part of Scotland? Where is Edinburgh? Glasgow? On what river? *This river is famed for the ocean steamers built upon it.* Where is Dundee? Inverness? Aberdeen? Dumfries? Ayr? Stirling?

Ireland.—What bodies of water separate Ireland from England? From Scotland? What ocean west and south? Which portions of the island are mountainous? Where are the Wicklow Mountains? Where is Cape Clear? *The Atlantic Telegraph terminates on the Irish coast at Valentia Bay.* Where is it? Where is Dublin? Belfast? Cork? Queenstown? Londonderry? Limerick?

THE BRITISH ISLES
Scale of Statute Miles
SHETLAND IS.
Lerwick
ATLANTIC OCEAN
NORTH SEA
THE HEBRIDES
ORKNEY IS.
Kirkwall
St. Kilda
SCOTLAND
Dundee
St. Andrews
Edinburgh
Glasgow
IRELAND
Belfast
Dublin
Galway
Limerick
Cork
C. Clear
IRISH SEA
ENGLAND
Newcastle
Liverpool
Manchester
Sheffield
London
Dover
CARDIGAN BAY
ST. GEORGES CHANNEL
BRISTOL CHANNEL
ENGLISH CHANNEL
Isle of Wight
CHANNEL ISLANDS
Alderney
Guernsey
Jersey
BAY OF ST. MALO
St. Malo
FRANCE

LVII. RUSSIA, NORWAY, AND SWEDEN.

1. **Russia.**—Russia is one of the largest empires in the world. It includes about one-half of Europe and the whole of Northern Asia, and has a population of eighty-five millions.

Russia, Great Britain, and the United States exercise dominion over one-third of the land surface of the earth, and over one-fourth of its inhabitants. The English possessions lie chiefly in warm climates, the American in temperate, the Russian in cold.

2. Russia in Europe is, for the most part, a level country, occupying a large part of the "great plain," and sloping as the rivers flow.

3. Its rivers are the largest in Europe.

They are connected by numerous canals, and form important highways across the country from the Caspian Sea to the Baltic.

4. **Climate.**—In Northern Russia the winters are long and severe, the summers short and hot. Central Russia has a comparatively mild climate, while south of the 50th parallel the summers are long and oppressive, and the winters so mild that snow rarely falls.

5. **Resources.**—Russia is rich in minerals of all sorts, including gold, silver, platinum, and precious stones.

No country produces more exquisitely beautiful malachite.

The "Black Lands," or fertile prairies of Central and Southern Russia yield large crops of grain, hemp, and flax.

This part of Russia, with the basin of the Danube, is the granary of Europe.

The grassy "steppes," or treeless plains, sustain immense numbers of sheep, horses, and cattle, and the vast forests of the north abound in fur-bearing animals.

6. **Pursuits.**—Agriculture, mining, and manufacturing are the chief pursuits.

A large *inland trade* with Europe and Asia is carried on by means of fairs.

The largest fairs in the world are held at Nijni (*nēzh'nē*) Novgorod. Merchants from China, Mongolia, India, Afghanistan, Persia, Turkey, and all parts of Europe attend this fair. The annual concourse numbers more than two hundred thousand merchants. To the great wool fair and horse market held in winter at Kharkov, 80,000 sledges come over the snow.

The overland tea trade with China is enormous.

The internal and foreign commerce have been greatly increased by the network of railways which now connect the principal cities and seaports.

The *maritime* trade of Russia is chiefly with England.

The chief article of export is wheat. Flax, hemp, lumber, wool, furs, and iron are also important exports.

7. **People and Government.**—The majority of the people are of the Sclavonic race.

About one-third of them were formerly slaves, called serfs. But, in 1862, they were emancipated by the Emperor Alexander II.

The Government is an absolute monarchy. There is no constitution, no congress, or parliament to direct the action of the Czar.

The Russians have adopted the Greek form of worship, and the emperor is, in temporal things, the head of the Church.

8. **Cities.**—St. Petersburg, the capital and chief commercial city of the empire, is situated on the flat and dreary marsh lands of the river Neva, not far from its entrance into the Gulf of Finland.

WINTER PALACE AND ADMIRALTY, ST. PETERSBURG.

It lies on both sides of the river, which is crossed by several bridges. The most celebrated public buildings are the Church of St. Isaac and the Winter Palace of the Czar.

Moscow, the principal centre of manufactures and internal commerce, is celebrated for a vast structure called the Kremlin. It comprises forts, barracks, palaces, churches, and cathedral all in a group.

Napoleon I., in 1812, proposed to march his grand army into Moscow for winter quarters. The inhabitants set fire to their houses; the whole place was laid in ashes; the invading army was compelled to retreat, and was completely destroyed.

Warsaw is the emporium of trade for Russian Poland.

Odessa, on the Black Sea, is the great grain market of Russia.

Cronstadt is the port of St. Petersburg, and the principal naval station of Russia. Kichenev is largely engaged in the Black Sea trade.

Riga, on the Baltic, and Saratov, on the Volga, are important grain and lumber markets. Kazan is an entrepôt for the trade with Asia.

Archangel, in latitude 64° north, is the great shipping port of Northern Russia. Its export trade, largely in grain, finds its way to foreign ports through the Arctic Ocean.

Astrakhan is an inland city on the Volga River. The trade of Russia with Western Asia passes through it.

9. **Norway and Sweden.**—These two countries are under one king. Each, however, makes its own laws.

They occupy a mountainous peninsula, often called Scandinavia.

The face of the country is rugged, and the rays of the sun strike feebly into its deep glens, so that the cultivation of the soil is not very remunerative. Sweden, however, produces a surplus of grain.

In the northern part of Norway, during several weeks in summer, the sun does not set at all, and travellers often go to the North Cape to see the midnight sun.

10. The chief branches of industry are connected with the *forests*, which are very extensive and furnish timber for the

navies of Europe; with the *mines*, which supply us with the celebrated Swedish iron; and with the *sea-fisheries*, which furnish the chief supplies of fish for Europe.

The exports of Sweden are iron, copper, and grain; those of Norway are lumber, fish, and ice.

The Swedes and Norwegians are Lutherans in religion. They belong, therefore, to Protestant Europe. Education has received great attention. Public instruction is free and compulsory.

11. Cities.—Stockholm is the capital of Norway and Sweden. It is built on a few small islands near Lake Malar.

Carlscrona, the naval arsenal of Sweden, and Gottenburg are commercial cities.

Christiania, the capital of Norway, has a large trade in lumber.

Frederickshald stands on a bay of the Christiania fiord. It has an obelisk to mark the spot where the famous Charles XII. fell, in 1718, while besieging the fortress.

Bergen is chiefly engaged in the Lofoden fishery.

12. Lapland, a region of Sweden, Norway, and Russia, lying within the Arctic circle, is inhabited by the diminutive Lapps, of whom there are no less than 24,000 in Sweden and Norway.

The reindeer is the chief source of wealth, supplying the people with most of the articles of food and clothing that they use.

Hammerfest, the most northerly town of Europe, consists of a single street of one-storied frame houses.

Questions.—1. What is said of the size and population of Russia? What three great powers together control one-third of the earth? How much of its population do they rule? Where do the dominions of each lie? 2. Describe the surface of Russia. 3. Its rivers. 4. Climate. 5. Mineral resources? Agricultural? Black Lands? Steppes? 6. Chief pursuits? How is the inland trade of Russia carried on? What of the Nijni-Novgorod fairs? Fur trade? Maritime commerce? Chief exports? 7. To what race do the people chiefly belong? What of the serfs? Government? Religion? 8. The capital? Where? What of Moscow? Warsaw? Odessa? Cronstadt? Kischeneff? Riga? Kasan? Archangel? Astrachan? 9. How are Norway and Sweden governed? What peninsula do they occupy? Why is the cultivation of the soil not very remunerative? For how long does the sun not set in Northern Norway? 10. Chief industries? Exports? Religion? Education? 11. The capital of Sweden and Norway? Two commercial cities? The capital of Norway? What of Frederickshald? Bergen? 12. Where is Lapland? Inhabitants? Chief source of wealth? What of Hammerfest?

LVIII. SPAIN, PORTUGAL, AND ITALY.

1. These countries lie mainly between the same parallels of latitude. They have similar climates and productions, and therefore similar pursuits.

2. Spain and Portugal.—Spain and Portugal occupy the Spanish Peninsula. This peninsula consists of a high central plateau, traversed by several parallel mountain chains, which are separated by broad valleys.

Many of the mountain peaks are high enough to be always covered with snow.

3. The inhabitants are of a dark complexion, with black hair and eyes, quite different from the flaxen-haired, blue-eyed Germans.

Like the Italians, and all other people who live in mild climates and under bright skies, they are lively and gay, prone to out-door amusements, fond of bright colors, and much given to music and dancing.

4. The Government in both of these countries is monarchical. The Roman Catholic is the established religion.

5. Spain.—Spain is rich in minerals, especially in silver, lead, and quicksilver.

Among the most famous mines in the world are the quicksilver mines of Almaden.

The agricultural productions are grain, tobacco, silk, olives, grapes, and other fruits.

The chief articles of export are wine, silk, cork, wool, olive-oil, raisins, aloes, and other fruits, both fresh and dried.

The forests yield large supplies of cork, which is the bark of the cork-oak tree.

6. Cities.—All the principal cities are connected by railroads.

Madrid is the capital and largest city. It is celebrated for its palace, museums, and university.

Barcelona is next in size and the chief commercial city.

Valencia is famous for its silks; Seville for its Moorish antiquities and collections of paintings.

Malaga exports grapes, raisins, and wines. Palos is celebrated as the place from which Columbus sailed to America, on his first voyage of discovery.

In Granada is the great Moorish palace called **the Alhambra**. It is the finest specimen of arabesque architecture in Europe.

7. Gibraltar is a celebrated fortress cut out of the solid rock. It commands the passage between the Mediterranean and the Atlantic.

The town is inhabited by people of all nationalities. It is a free port, and belongs to England.

8. The Andorra Republic has 150 sq. ms.; pop. 12,000.

It received its independence as a gift from Charlemagne in return for the

services which it rendered to his empire in repelling the Moors when they attempted to cross the Pyrenees.

9. Portugal.—Portugal occupies the western portion of the Peninsula, and its physical features are similar to those of Spain. So, also, are its products and exports.

It yields a larger supply of cork than any other country.

Lisbon is the capital and principal commercial city. It was the scene of a fearful earthquake in 1755.

Oporto is chiefly known for its port wine.

The **colonial possessions** of Spain and Portugal are important. The principal ones of Spain are Cuba, Porto Rico, and the Philippine Islands; those of Portugal, Lower Guinea, Mozambique, Madeira, and other islands on the coast of Africa.

ROME—BRIDGE AND CASTLE OF ST. ANGELO.

10. Italy.—Italy was the seat of the ancient Roman Empire, and the land of Galileo, Dante, and Tasso.

It is famous for its bright skies and beautiful scenery, its delicious fruits, magnificent public buildings, picture galleries, and works of art.

Besides the Peninsula, Italy comprises Sicily, Sardinia, and other less important islands.

Northern Italy consists chiefly of a vast plain; the rest of the peninsula is traversed throughout its length by the Apennines as a sort of a backbone.

Southern and Insular Italy contain the celebrated volcanoes of Vesuvius, Etna, and Stromboli.

Alpine Passes.—Italy is connected with Central Europe by means of passes over the Alps, and by the celebrated Mont Cenis and St. Gothard tunnels. Among the most famous passes are the Simplon, the St. Gothard, the Great St. Bernard (crossed by Napoleon and his army in 1800), the Grimsel, the Cervin, and the Spluegen.

11. Productions and Pursuits.—Wheat, corn, and rice, the mulberry, vine, and olive, the orange, lemon, and fig are extensively grown.

Lombardy is the garden spot of Italy. Its plains are well watered, and its meadows may be mowed six times in a year. It is famed for the produce of its dairies, and the extent of its rice fields and mulberry groves. The mulberry leaf is the food of the silk-worm.

Italy produces more raw silk than any other country in Europe.

The sulphur of Sicily, the marble of Carrara, iron, and borax are the principal mineral productions.

The chief occupation of the people is agriculture. Northern Italy is largely engaged in manufactures.

The fisheries on the coast employ as many as 5,000 or 6,000 boats and 20,000 men.

The principal export is silk. Velvets, straw hats, macaroni, olive oil, fruits, fish, and marble are also largely exported.

12. Government.—The Government is a constitutional monarchy. The established religion is the Roman Catholic; others, however, are tolerated.

13. Cities.—Rome is the capital of Italy, and the residence of the Pope, who is the head of the Roman Catholic Church.

Its ruins, its churches, its art galleries and museums, its traditions and associations, make it the most famous city in the world. It is continually crowded with students and tourists.

Naples is the largest city of Italy. It is noted for its beautiful bay, and for its manufactures of silk and coral.

Near it stood the cities of Herculaneum and Pompeii, which were buried by the lava and ashes from Vesuvius in the year 79 A.D., and discovered about a century ago.

Venice occupies seventy-two small islands, connected by bridges. Canals take the place of streets. They are navigated in boats called gondolas.

Milan, the chief city of Lombardy, is the centre of the silk trade, and noted for its manufactures and its beautiful cathedral built of white marble.

Turin is celebrated for its museum and the grandeur of its scenery.

Florence, one of the most beautiful and healthful cities of Italy, is rich in its works of art. Near by is Fiesole (*fe-es'o-lay*), where Galileo used his telescope.

Palermo, the largest city on the island of Sicily, is a great fruit market.

Genoa, famous as the birthplace of Columbus, manufactures the finest of silks and velvets.

14. San Marino is a little republic within the limits of Italy, situated on the top of a rugged mountain over 2,000 feet high.

Questions. 1. How are Spain, Portugal, and Italy alike? 2. What do Spain and Portugal occupy? What is said of this peninsula? 3. Inhabitants? 4. Government? Religion? 5. Minerals of Spain? Agricultural productions? Exports? What is cork? 6. How are the chief cities connected? What is said of Madrid? Barcelona? Valencia? Seville? Malaga? Cadiz? The Alhambra? 7. Gibraltar? 8. Andorra Republic? 9. What is said of the physical features of Portugal? Of its products and exports? Cork? Lisbon? Oporto? Name the colonial possessions of Spain and Portugal. 10. For what is Italy famous? What does it comprise? Of what does Northern Italy consist? What is said of the Apennines? Volcanoes? Of Alpine passes? 11. Agricultural products? What of Lombardy? Produce of raw silk? Minerals? What is the chief occupation? Where are manufactures carried on? What is said of the fisheries? Exports? 12. What is said of the government? Religion? 13. What is said of Rome? Naples? Venice? Milan? Turin? Florence? Palermo? Genoa? 14. What of San Marino?

LIX. GREECE AND TURKEY.

1. Greece.—Greece occupies the south-eastern extremity of the European continent.

The natural divisions are: I. Continental Greece, including the mainland and the Morea; II. Insular Greece, consisting of numerous adjacent islands.

The surface of Greece is rugged and mountainous. Its coast is deeply indented by arms of the sea, but it has no navigable rivers.

The scenery is beautiful, the climate delightful.

The industries are chiefly agricultural and commercial.

By far the most important product is the currant (a species of small grape), which is grown all along the shores of the Morea. We get also from Greece figs and olive oil.

Greek merchants and sailors carry on a large part of the commerce of the "Levant." The countries bordering on the eastern part of the Mediterranean are called the *Levant*.

Greece suffered under Turkish misrule for many generations; but fifty years ago it became independent. The country, however, is infested with brigands, and the laws are badly administered.

2. Athens is the capital of Greece. It is unrivalled for the fame of its ancient philosophers, poets, painters, and orators.

The modern city is marked by Parisian taste in architecture, and the present generation have adopted Parisian costumes.

Near by is Mount Hymettus, famed for its honey. The tax on bees forms a large part of the national revenue.

Corinth was in ancient times famed for its wealth.

Syra is a great centre of steam navigation for the "Levant."

3. Turkey in Europe.—The Turkish or Ottoman Empire lies partly in Africa, partly in Asia, and partly in Europe.

It includes also Crete, and other islands in the Eastern Mediterranean.

Turkey in Europe is semi-peninsular. It has a sea on the east and on the west, and another at no great distance on the south. This modifies the climate.

The surface of the country is varied. The principal range of mountains is the Balkan.

The natural resources are great. Turkey is rich in minerals, forests, and farming lands.

A bad government, however, depresses all its industrial pursuits.

The chief exports are grain, goats' hair, valonia (acorn-cups for tanning), opium, raw silk, carpets, fruits, perfumes, and rhubarb.

4. The inhabitants of European Turkey are of several different nationalities. Many of them are Christians and Jews.

The Turks are the governing race. They are Mongolians, and have dark complexions. The prevailing religion is the Mohammedan.

5. The government of Turkey is styled the Sublime Porte, from the gate (*porte*) of the Sultan's palace, where justice was formerly administered. The sovereign is called the Sultan.

The Principality of Bulgaria is ruled by a Christian Prince elected by the people. It pays tribute to Turkey. Sophia is the capital.

The Province of Eastern Roumelia has a Christian Governor, but is partially dependent on Turkish rule.

6. Cities.—Constantinople, the capital of the Turkish Empire, is beautifully situated on the Bosporus. Its geographical position renders it, in the eyes of the "great powers" * of Europe, "*the Key to the East.*" It is also the centre of trade for the Levant.

This city was founded on the site of old Byzantium, by Constantine the Great, in the year 328. In 1453 it fell into the hands of the Turks.

It contains the seraglio (*ser-al'yo*) or residence of the Sultan, and the mosque of St. Sophia. This building (once a Christian church) contains some columns which originally stood in the temple of Diana at Ephesus.

The streets are narrow and filthy, and the houses are built chiefly of wood; hence the frequency and destructiveness of fires. The city is said to be burned down on an average once in every fifteen years.

THE SERAGLIO.

"*The Golden Horn*" is an inlet of the Bosporus.

The chief manufactures are carpets, leather goods, and meerschaum pipes. (Meerschaum means *the foam of the sea*. It is really a kind of soft chalk.)

Adrianople is in a land of roses. It manufactures cotton and woollen goods, silk, and "attar of roses."

Salonica is beautiful in the distance, with its mosques, minarets, domes, and towers. It manufactures carpets, silk, and leather goods.

The celebrated Mount Athos stands on a peninsula to the east of Salonica. It has been occupied for ages by a community of Greek monks.

7. Roumania is an independent principality formerly ruled by Turkey. Its industries are chiefly agricultural.

Bucharest, the capital, exports grain, wool, timber, salt, cattle, and wax. Jassy is an important centre of trade.

8. Servia.—The Principality of Servia formerly belonged to Turkey. Its resources are almost wholly undeveloped. The chief article of export is hogs. Millions of them feed in the vast forests on the acorns which cover the ground.

Belgrade, on the Danube, is the capital.

Montenegro, bordering on the Adriatic, is a little, independent monarchy.

Questions.—1. Where is Greece situated? Its natural divisions? Surface? Coast? Industries? Products? Exports? What is said of Greek merchants? The "Levant"? The government? 2. What of Athens? Hymettus, the bees? Corinth? Syra? 3. Where does the Turkish Empire lie? Is it wholly on the mainland? What modifies the climate? Principal range of mountains? Natural resources? Influence of government? Exports? 4. Inhabitants? Religion? 5. Government? What is said of the Principality of Bulgaria? East Roumelia? 6. Constantinople? What is the effect of the geographical position of this city? Buildings of interest? Houses? Manufactures? What is said of Adrianople? Salonica? Mount Athos? 7. Of Roumania? 8. Servia? Exports? Montenegro?

* Great Britain, Russia, Germany, France, and Austria.

LX. FRANCE.

In Northern France the chief products are grain,

MAP STUDIES.

CENTRAL EUROPE.

France.—Bound France. What great mountain range separates France and Italy? What range between France and Switzerland? Between France and Spain? Between France and Alsace? What mountains in Southern France? In Central France? Where is the Puy de Dome? What river enters the Gulf of the Lion? Between what mountain ranges does it flow? Into what does the Seine flow? (*The Seine flows through the city of Paris.*) What two large rivers flow into the Bay of Biscay? Where is the island of Corsica? (*It belongs to France.*) Where are the Landes? Ans. *They are large, sandy regions on the west south of Bordeaux. Sheep browse upon the scanty grass and heath, and the shepherds walk on stilts while watching them.* What is the capital? What seaport at the mouth of the Seine? What important seaport on the Mediterranean? Where is Lyons? Brest? Rouen? Nantes? St. Etienne? Toulouse?

German Empire.—What two countries on the south? What three on the west? What one on the east? What country and what two seas on the north? What mountain range between Bohemia and Austria? Between Bohemia and Saxony? Between Silesia and Bohemia? What part of the empire is occupied by Prussia? Bavaria? Wurtemberg? Saxony? Baden? Alsace? Hesse? What rivers flow into the North Sea? What into the Baltic? What large river crosses Bavaria? Where is the Ems? Where are the Harz Mountains? What is the capital? Where is Hamburg? Bremen? Lübeck? Dresden? Munich? Leipsic? Nuremberg? Strasbourg? Mayence? Cologne? Breslau? Donaux? Frankfort? Wiesbaden? Stettin? Konigsberg? Heidelberg? Ehrenbreitstein?

Netherlands.—What sea on the north and west? What empire on the east? What country on the south? What large river flows through the Netherlands? What sea indents the coast? Islands skirt the coast? What is the capital? Where is Rotterdam? Amsterdam?

Belgium.—What countries nearly surround Belgium? What sea on the north-west? What is the capital? On what river? What famous battle-field near the city? Ans. *Waterloo.* On what river is Ghent? Where is Antwerp? Liege? Namur?

Denmark.—What sea on the west? What bodies of water on the north and east? What portion of Germany on the south? Name the peninsula and two largest islands of Denmark? What is the capital? On what island? Where is Elsinore?

Austrian Empire.—What countries on the west? On the north? East? South? What sea forms part of the southern boundary? What is the north-east? What near the Adriatic coast? What separates Austria from Italy? What is the extreme western portion of the Austrian Empire called? In what part of the empire is Hungary? Bohemia? What great river traverses the country? Where is the Save? Drave? Theiss? Moldau? The Platten Sea? What is the capital? On what river? Where is Buda-Pesth? Prague? Brunn? Gratz? Bosna Serai? Lemberg? Tokay? What is the great seaport?

Switzerland.—What country on the south? East? North? West? What mountains separate Switzerland from Italy? From France? What lake in the north-east? South-west? The centre? What river rises on the northern slope of the Alps and enters the Gulf of the Lion? Ans. *The Rhone. The river runs through the Lake of Geneva.* What river rising not far from the source of the Rhone flows into the North Sea? Ans. *The Rhine. It passes through the Lake of Zurich.* What is the capital? Where is Geneva? Zurich? Bale? Lucerne?

LX. FRANCE.

1. France has an area larger than California, but not so large as Texas.

Its eastern and southern portions are hilly and mountainous. The northern and western districts are generally level.

The Rhone, the Seine, the Loire, and Garonne are the principal rivers. The Rhone is of little value to navigation, owing to the rapidity of its current.

2. Climate. The latitude of France corresponds nearly to that of Michigan, but its climate is far milder. The winds from the Atlantic and the Mediterranean modify the temperature.

3. Productions.—In Southern France the vine, the olive, the orange, the pomegranate, the fig, and the silkworm all thrive.

In the lower valley of the Rhone enormous quantities of truffles are found. They are an edible mushroom exceedingly delicacy. They grow underground about the roots of oak trees, and are discovered by the aid of trained dogs and pigs which detect them by their scent.

Central France is the wine and maize region.

The districts of Champagne and Burgundy, and the valleys of the Garonne and Dordogne constitute the greatest wine-producing country in the world.

In Northern France the chief products are grain, orchard fruits, and root crops.

The beet root is extensively cultivated for making sugar.

4. Occupations.—The people are unsurpassed for thrift and industry. They are largely engaged in agriculture, manufacturing, and mining.

The breeding of fish and the raising of fowls also receive much attention. Those who are engaged in these little branches of industry earn in the aggregate, more than 20 million dollars annually.

In manufactures France ranks next to England.

The French artisans surpass all others in the designing of patterns, and in the arrangement of colors.

In foreign commerce France is second to England alone. Its domestic trade is very extensive.

More than 100 canals unite the various rivers, while numerous railways extend from Paris to all parts of the country.

5. Government and Religion.—France is a Republic. The people enjoy religious freedom; but the majority are Roman Catholics.

The French, in general, are descendants of Roman colonists. In Brittany are found the Bretons, whose language is almost exactly the same as the Welsh. They are Celts.

6. Cities.—Paris is the finest capital and the most splendid city in the world. It sets the fashion in dress for Europe and America, and its language is the one in which the diplomats of Europe generally hold intercourse.

Paris manufactures an endless variety of articles, from the finest cambric needle to the most powerful steam-engine.

It is famed for its jewelry, gloves, perfumery, and fancy articles of all sorts. Its schools and other institutions of learning, its scientific societies, libraries, and public buildings are very celebrated.

PARIS—TOULOUSE.

The Palace of the Tuileries, the Bourse (*Exchange*), the churches of Notre Dame and the Madeleine, are among the most interesting public buildings. The Champs Elysées (*Elysian Fields*) is one of the most beautiful streets in the world.

Versailles, near Paris, contains a park and a magnificent palace, built by the architect Mansard as a residence for Louis XIV.

Lyons is the second city in France, and the foremost of all in silk manufactures. It employs 100,000 persons in this industry.

Marseilles is the largest seaport town in France.

It is on the Gulf of Lions, or Gulf of the Lion, so named, not from the city of Lyons, but from the storminess of its waters. It is extensively engaged in manufacturing, and has a large trade in silks, fruits, and wines, and in human hair.

Bordeaux is noted for its wines; Lille for its linen and cotton goods, beet-root sugar, and rapeseed oil.

Toulouse is famed for its steel works, cannon foundries, and woollen factories; Rouen, the "Manchester of France," for its cotton mills. St. Etienne is in the midst of coal-mines. It is noted for its fire-arms, and contains the largest ribbon factories in the world.

Cherbourg, with its fine breakwater, Brest, and Toulon are the great naval stations of France.

The winters at Toulon are so mild that the fig, date, orange, aloe, and pomegranate flourish in the open air. Amiens is noted for its cotton and woollen goods, and Nismes (*nemo*) for its silks, woollens, and wine.

At Rheims the sovereigns of France used to be crowned. It is largely engaged in the manufacture of woollens and in the sale of wines. In Bayonne the first bayonets were made. Hence their name.

At Nantes (*nantz*) the famous edict giving religious freedom to the Protestants was signed by Henry IV., in 1598. The city is largely engaged in commerce and ship-building.

Colonial Possessions.—The most important colonial possessions of France are—in Africa, Algeria and Senegal; in Asia, the settlements in Cochin China; in the New World, French Guiana, and the islands of Martinique, St. Bartholomew, and Guadaloupe; in Oceania, New Caledonia, Tahiti, and the Marquesas.

The island of Corsica, in the Mediterranean, also belongs to France.

Questions.—**1.** Area of France? Surface? Rivers? **2.** Climate? **3.** Productions of Southern France? Those of Central France? Northern? From what is sugar made? **4.** Occupations? Fish-culture and fowl-raising? Rank in manufactures? In what do the artisans excel? Foreign commerce? Domestic? Canals? Railways? **5.** Government and religion? People? **6.** What of Paris? Use of French language in Europe? Manufactures? Name some of the public buildings. The finest street. What of Versailles? Lyons? Marseilles? Bordeaux? Lille? Toulouse? Rouen? St. Etienne? Cherbourg? Brest? Toulon? Amiens? Rheims? Bayonne? Nantz? Foreign possessions?

LXI. THE GERMAN EMPIRE.

1. The German Empire is a confederation including the four kingdoms of Prussia, Saxony, Bavaria, and Wurtemburg, together with six Grand Duchies, five Duchies, seven Principalities, three Free Cities, and one Imperial Province.

2. The German Population of Europe.—A large part of Central Europe, including not only the German Empire but also parts of Switzerland and of the Austrian Empire, is occupied by people who speak German, and who are remarkable for their blue eyes, flaxen hair, and fair skins.

They number at least 52,000,000. Of these, 41,000,000 belong to the German Empire, 8,000,000 to Austria, 2,000,000 to Switzerland, and about 1,000,000 to Russia.

It is worthy of note that they all inhabit a region of country only about as large as Texas, and that among them [illegible] are no less than 31, each with a population of 50,000 and upward.

The Germans are highly intelligent, and very industrious, ingenious, and thrifty. They are noted for their scientific and literary attainments, and for their love of music.

3. Surface.—The northern and eastern parts of Germany consist of a portion of the great plain of Europe; the southern and western parts are mountainous.

The Rhine is the most important river. It is noted for its romantic scenery. Canals connect it with the Danube, the Seine, and the Rhone.

4. Productions.—Germany has immense deposits of coal, iron, copper, zinc, and other minerals.

The most singular mineral production is amber, which is cast up by the waves of the Baltic, and the collection of which is a prerogative of the crown.

Mineral springs also abound. Baden-Baden, Aix-la-Chapelle, and Wiesbaden are the most famous watering-places.

The agricultural productions are varied. The grains are raised in great abundance, flax grows everywhere, tobacco and the vine flourish in the warm river valleys.

Forests cover one-fourth of the country.

5. Occupations.—Three-fourths of the population are engaged in tilling the soil. Wool-growing, mining, and manufacturing are also leading pursuits.

The woollen goods of Saxony and the Rhine wines of Prussia are celebrated.

To promote trade, great commercial fairs are held. Those of Leipsic are the most famous.

6. Government.—The general government of Germany is a limited monarchy. Each State has also its own government for the regulation of its own affairs.

Representatives are sent from each State to the Federal Council and to the Reichstag, which are the Upper and Lower Houses of the German Parliament. The Council consists of 59 members, the Reichstag of about 433. The former are appointed by the Crown, the latter are elected by the people.

The King of Prussia is also the Emperor of Germany.

7. Prussia is the master-spirit of Germany. It is the largest and most populous of the German kingdoms, and one of the most powerful in Europe. Its army is one of the best disciplined in the world.

Prussia is the great manufacturing centre of the empire, and is connected with all parts of the country by railroads.

Its public schools and other institutions of learning have a world-wide celebrity.

8. **The Free Cities** or "Hanse Towns," Hamburg, Bremen, and Lubeck, are republics. They are extensively engaged in commerce.

Hamburg is the chief seaport and commercial city of Germany.

9. **Cities.**—Berlin, the capital of the empire and of the Kingdom of Prussia, is one of the finest cities of Europe. It is celebrated for its university and public buildings.

Dresden, the capital of Saxony, is famous for its art gallery and libraries. Munich, the capital of Bavaria, is renowned for its literary institutions and galleries of art.

Breslau is the great wool and linen market of the empire, and the centre of an extensive trade.

Leipsic is famed for its printing establishments, and for the number and cheapness of its publications in all languages.

Cologne, famous for its cathedral, and its wine and perfumery, is the most populous city of Prussia on the Rhine. Ehrenbreitstein is one of the strongest Prussian citadels.

From Konigsberg and Dantzic large quantities of grain are shipped. Stettin is an important seaport.

Frankfort is a great financial centre. Strasbourg is celebrated for its cathedral and its strong fortress.

Questions.—1. What does the German Empire include? 2. About how many people in Europe speak German? How large an area do they occupy? What of their cities? Their character? 3. Surface of Germany? 4. Mineral resources? Agricultural? 5. Occupations? Fairs? 6. Government? Who is Emperor of Germany? 7. What is said of Prussia? Manufactures? Schools? 8. Name the Free Cities. What is said of Hamburg? 9. What of Berlin? Dresden? Munich? Breslau? Leipsic? Cologne? Ehrenbreitstein? Konigsberg and Dantzic? Stettin? Frankfort? Strasbourg?

LXII. NETHERLANDS, BELGIUM, AND DENMARK.

1. **The Netherlands.**—The Netherlands, also called Holland, is a low and flat country intersected with canals which drain the land and serve as roads. It has literally been reclaimed from the sea, the waters of which are kept out by means of embankments called "dykes."

The Dutch are a sober, provident, and thrifty people. Their chief industries are agriculture and seafaring.

The country is a sort of dairy farm, from which the market of England is largely supplied with cattle, butter, and cheese.

The Dutch are fine sailors, and are extensively engaged in the fisheries and

commerce. The navy of the Netherlands has always been one of the most efficient in Europe.

The government is a constitutional monarchy. The religion is Protestant.

2. Cities.—The Hague is the capital, and is famed for its beautiful palaces and museums.

Amsterdam is the largest and most important city. Its diamond polishers are the most celebrated in the world.

Rotterdam is next to Amsterdam in size and trade. Utrecht and Leyden are important towns.

The **colonial possessions** of the Netherlands contain a population numbering about 24 million people, or more than sixteen times as large as that of the mother country. They embrace many of the most important of the East India Islands, several of the West Indies, and Dutch Guiana. The most valuable of all is Java.

3. Belgium.—Belgium is the best cultivated and most densely populated country in Europe.

It is equaled in this respect only by some parts of China and the valley of the Ganges.

The country is rich in soil, forests, and minerals, and is noted for the extent and variety of its manufactures.

The government is a constitutional monarchy. The majority of the people are Roman Catholics.

4. Cities.—Brussels, the capital, on the Senne, is widely known for its lace, which is considered the finest in the world. Near Brussels is the field of Waterloo.

Antwerp is the great commercial emporium of Belgium.

Ghent is extensively engaged in the manufacture of cotton goods.

Liege is the seat of the Belgian arms works, which employ about 20,000 men.

Ostend, an important seaport on the North Sea, is the headquarters of the Belgian cod and herring fisheries. Bruges is famous for its lace and lace. This town derives its name from its bridges, of which there are 54.

5. Denmark.—Denmark is one of the oldest States in Europe. It consists of a peninsula projecting toward the southern coast of Norway, together with Jutland, and several important islands near the entrance of the Baltic Sea.

The coasts are low, and in some places dykes are necessary to keep out the waters of the sea. The western shore of Jutland is one of the most dangerous in the world, so that it is called by sailors the "iron coast."

6. The peninsular form of Denmark renders the climate moist, even, and mild.

The inhabitants are chiefly devoted to agriculture, stock-raising, and fisheries.

The principal exports are grain, butter, cheese, and cattle.

The government is a limited monarchy, and the religion of the people is Lutheran.

Copenhagen, on the island of Zealand, is the capital, and the only large town in the kingdom.

Elsinore, on the Danish Sound, is an important naval station.

The **colonial possessions** of Denmark are Iceland, Greenland, several of the West Indies, and the Faroe Islands.

The Faroe Islands (population 12,000) are subject to severe storms. Trees will not grow. Barley does not always ripen. Many of the islanders live by climbing the dangerous cliffs for the eggs and feathers of the sea-birds.

Questions.—1. Describe the surface of the Netherlands. How is it protected from the sea? What is said of the Dutch? Their industries? What does England get from the Netherlands? What is said of Dutch fisheries and commerce? Navy? Government? Religion? 2. What of the Hague? Amsterdam? Rotterdam? Other towns? Colonial possessions? 3. How does Belgium compare with other European countries in cultivation? In population? What is said of its resources and manufactures? Government? Religion? 4. Of Brussels? Waterloo? Antwerp? Ghent? Liege? Ostend? Bruges? 5. Of what does Denmark consist? What of its coast? 6. Climate? Industries? Exports? Government? What is said of Copenhagen? Elsinore? Colonial possessions? Faroe Islands?

LXIII. AUSTRIA AND SWITZERLAND.

1. The Austrian Empire.—The Austrian Empire consists of the Archduchy of Austria and the Kingdom of Hungary, together with several imperial provinces.

The official title is the Austro-Hungarian Monarchy. The government is constitutional.

The inhabitants are Sclaves, Germans, and, in Hungary, the Magyars (*mad'-yars*). The Jewish population is very large.

The Germans, though in the minority, are the dominant and most intelligent race.

Three-fourths of the empire is mountainous. Hungary consists of a great treeless plain of surpassing fertility. Bohemia is a high plain inclosed by four ranges of mountains.

2. Productions and Pursuits.—Austria is rich in minerals, especially in iron and salt.

The quicksilver mine of Idria, next to those of Almaden in Spain, is the richest in Europe.

The hills of Austria abound in mineral waters. Those of Carlsbad, Toplitz, and Seidlitz are of world-wide celebrity.

Agriculture is the chief industry. The leading productions are grain, wine, tobacco, and flax.

The wines of Hungary are among the most noted in Europe.

The western provinces are extensively engaged in manufacturing.

Bohemia is famed for its colored glasses are. Its factories of linens, and damask are also celebrated; 400,000 hands are employed in them.

The principal exports are corn, flour, wine, salt, and wool, cotton and linen goods, iron, glassware, and musical instruments.

The Danube, with its tributaries, extending from one end of the empire to the other, furnishes facilities for a large *inland* trade, while, with the Black Sea, it forms a continuous water route for *foreign* commerce. It presents the grandest river scenery in Europe. The "Iron Gates," near Orsova, are the "water-gap" of the Danube. The river here divides the Carpathian and Balkan Mountains.

3. Cities.—Vienna, on the Danube, is the capital, and the chief seat of the manufacturing industry of the Austrian Empire. It is the principal focus of the inland trade, as Trieste is of the foreign trade. It is noted for its splendid public buildings and libraries.

The workshops of Vienna send forth annually large quantities of hardware, porcelain, silks, jewelry, gold and silver embroideries, and musical instruments.

Prague, formerly the capital of Bohemia, contains one of the oldest universities in Europe.

It is the commercial centre of Bohemia, and the second city of Austria. It was the birthplace of John Huss and Kepler. The church in which Huss preached is still standing.

Gratz is in the iron region of Styria, and is the great centre of the iron trade. Brünn is noted for the extent of its woolen, silk, and linen manufactures.

Pesth, on one side of the Danube, and Buda (sometimes called *Ofen*, the *oven*, from its hot springs) on the other, are connected by a magnificent suspension bridge. They form Buda-Pesth, the capital and chief commercial city of Hungary.

Four large fairs are held here every year. The celebrated crown of St. Stephen, which was given to him by the Pope in the year 1000, is kept here.

Szegedin is an important grain and wine market of Hungary. Lemberg is noted for its fairs.

MINING SALT.

Wieliczka (*we-litch-ka*) is famous for its salt-mine, which has been worked for more than 600 years. It yields annually 100,000,000 lbs. of salt.

It contains a fresh-water lake and a rivulet, with a chapel whose walls, ceiling, floors, and chancel are all carved out of the natural salt.

4. SWITZERLAND.—The Republic of Switzerland consists of 22 separate States, or "Cantons," which are as distinct from each other as the States in the American Union. The central government is at Berne.

The general affairs of the Republic are managed, as with us, by a Congress.

5. Switzerland is the most mountainous country in Europe, and is world-renowned for its magnificent scenery. It is traversed by the Alps.

Many of the peaks are covered with perpetual snow, while hundreds of the valleys are filled with glaciers or ice rivers. The most famous of these is the Mer de Glace (*sea of ice*).

Mont Blanc, nearly three miles high, is the loftiest of the Alpine peaks.

The beautiful valley of Chamouni is at its base. Mont Cervin, or "The Matterhorn," rivals Mont Blanc in grandeur.

THE SEA OF GLACE, FROM MONTANVERT.

The Swiss Lakes are unrivalled for beauty.

Those of Geneva, Constance, and Lucerne are very celebrated.

The famous Hospice of St. Bernard is in Switzerland. It is the highest place of human habitation in Europe. It is occupied by Benedictine monks, who send out the sagacious dogs of St. Bernard, during snow-storms, with baskets of provisions and wine tied round their necks, to relieve travellers who get lost in the snow.

6. The Swiss are industrious and liberty-loving. They are classed among Protestant nations.

Owing to the mountainous character of their country, which is better adapted to grazing than tillage, they do not produce breadstuffs enough for their own use.

Their chief industries are cattle-raising, dairy-farming, and manufacturing.

They excel in the manufacture of watches and musical boxes.

The chief exports are watches, cheese, toys, and ribbons.

Geneva is famed for its manufactures, and for its beautiful situation. Zurich and Basle are noted for their silks; Lucerne for its beautiful scenery.

Questions.—**1.** Of what does the Austrian Empire consist? Official title? Government? Inhabitants? Surface? **2.** What is said of the minerals? The quicksilver mine? Mineral waters? Leading industry? Productions? What portion of the empire is engaged in manufactures? For what is Bohemia famed? Exports of Austria? What is said of the Danube? **3.** What of Vienna? Trieste? Prague? Gratz? Brünn? Pesth? Szegedin? Lemberg? Wieliczka? **4.** Of what does Switzerland consist? How is it governed? **5.** How does its surface compare with the rest of Europe? Name its mountains. What is said of its peaks and valleys? Name two of its highest peaks. What is said of its lakes? Hospice of St. Bernard? **6.** Character of the people? Chief industries? Exports? What is said of Geneva? Zurich? Basle? Lucerne?

SCENES AND ANIMAL AND VEGETABLE LIFE OF ASIA.

ASIA.

MAP STUDIES.

PHYSICAL ASIA.

Outline.—What oceans on the north, south, and east of Asia? What seas on the eastern coast? What islands inclose Behring Sea? Okhotsk Sea? Sea of Japan? East China Sea? South China Sea? (*This sea is often swept by the fearful storms called typhoons.*) What great bay and sea on the south? Seas on the west and north-west? How are Asia and Africa united? What two mountain ranges partly separate Europe and Asia? What two peninsulas project from the south of Asia? What peninsula between the Persian Gulf and the Red Sea? What separates Asia from North America? What peninsula between Behring and Okhotsk Seas?

Surface.—Is Asia in general highland or lowland? Where is the greater part of the lowland? What is it called? What are the steppes? The tundras? Where are they? What plain east of the Caspian Sea? North-west of the Persian Gulf? South and south-west of the Himalaya Mountains? What plain west of the Yellow Sea? What great region stretches across the continent from the Red Sea to the Pacific? What plateau between the Red Sea and the Persian Gulf? South of the Caspian? What mountain ranges form the eastern boundary of this plateau? What plateau north of the Himalaya Mountains? What one north of Thibet? What plateau east of the plateau of Turkestan? What desert occupies a large part of this plateau? (*This desert is covered with sand, bare rock, and pebbles.*) What plateaus occupy the two southern peninsulas? In what direction do the Asiatic mountains generally lie? Ans. *Not as the American mountains, from north to south, but in an eastwardly and westwardly direction.* What great mountain range north of the plain of the Ganges? Where are the Karakorum Mountains? Between what two plateaus are the Kuen Lun Mountains? What mountains bound the plateau of Turkestan on the north? What short range, lying north and south, incloses this plateau on the west? Ans. *The Bolor Tagh.* What table-land lies west of the Bolor Tagh? Ans. *The Pamir.* What do the natives call this? Ans. *The "roof of the world."* What can you say of it? Ans. *It is about 16,000 feet high, supports a scanty population, and has an almost Arctic climate.* What two mountain ranges separate the plain of Turkestan from the plateau of Iran? What range north of the plateau of Mongolia? What range bounds the desert of Gobi on the east? Where are the Nanling and Peling Mountains? What mountains border the plateau of the Deccan on the east and west? What plain between the Mediterranean and the Persian Gulf? (*This was the seat of ancient Nineveh and Babylon.*) What celebrated peak west of the Caspian Sea?

Rivers and Lakes.—What are the three great rivers of the Northern Plain? Into what ocean do they flow? How long are they frozen? Ans. *From October to May.* To what lake does the Yenesei rise? *Lake Baikal is the largest fresh-water lake in Asia. In winter it is covered with ice four feet thick, and is then traversed by sledges laden with tea from China, furs, flax, and hemp from Southern Siberia.*) What are the three great rivers on the eastern slope of Asia? Where is the Me-kong? The Irrawaddy? The Brahmapootra? The Ganges? How many rivers unite to form the Indus? (*These streams, which flooded by the rains of the monsoon season, so swell the Indus, that from May to September it cannot be ascended.*) What two rivers unitedly flow into the Persian Gulf? Where is the Caspian Sea? The Aral Sea? (*This and the Caspian are both salt-water lakes.*)

Minerals.—What minerals are found among the Altai Mountains? Among the Ural? What in the plateau of Turkestan? North of the Hindoo Koosh Mountains? On the shores of the Caspian Sea? In the Deccan? Between the Nanling and Peling Mountains? In Indo-China? The Japanese Islands?

Vegetation and Animals.—What grow on the icy Arctic shores? What are the products of the plain of Turkestan? Plateau of Iran? Arabia? Asia Minor? The district east of the Khingan Mountains? Plain of China? Uplands south of the Yang-tse-kiang? (*This is the great tea region.*) Plateau of Indo-China? Malay Peninsula? Deccan? Plains of the Indus and Ganges? In what waters are the whale and seal found? What animals in the Great Northern Plain? Plateau of Mongolia? Thibet? Iran? Arabia? The two great southern peninsulas?

ASIA
PHYSICAL MAP
SCALE OF MILES
ATLANTIC OCEAN
ARCTIC OCEAN
EUROPE
BALTIC SEA
BLACK SEA
MEDITERRANEAN SEA
KARA SEA
CASPIAN
RED SEA
AFRICA
ARABIA
SEA OF ARABIA
INDIAN OCEAN
BAY OF BENGAL
CEYLON
SOUTH CHINA SEA
EAST CHINA SEA
YELLOW SEA
SEA OF JAPAN
JAPAN ISLANDS
OKHOTSK SEA
BEHRING SEA
PACIFIC OCEAN
PHILIPPINE ISLANDS
SULU SEA
CELEBES SEA
NORTH AMERICA
NORTHERN PLAIN
GREAT PLAIN OF TURKESTAN
PLATEAU REGION
PLATEAU OF MONGOLIA
PLATEAU OF TIBET
PLATEAU OF GREAT TURKESTAN
DESERT PLATEAU
PLATEAU OF ARABIA
PLAIN OF CHINA
CHINA
INDUS
GANGES
NORTH EQUATORIAL CURRENT
MALABAR CURRENT
Longitude from Greenwich

LXIV. GENERAL DESCRIPTION.

1. We now pass from the States of Europe to the oldest nations and the largest continent on the globe.

Asia is larger than the two Americas together.

It contains the highest mountains and plateaus in the world, the largest population, and the greatest variety of race, language, and religion.

2. **Surface.** The continent may be divided into three sections: the Great Northern Plain; the Central Region of Desert Plateaus and Mountains; and the Peninsulas of the South.

3. **The Great Northern Plain** extends from the Altai Mountains and the Caspian Sea to the Arctic Ocean.

Its extreme northern portion, bordering on the Frozen Ocean, consists of low marshes called *Tundras*.

The *tundras* are dreary and desolate. Their scanty population is composed of the nomad tribes called Samoiedes, who live mainly on fish and the flesh of the reindeer.

South of this belt is a vast forest region, extending from the Gulf of Finland to the Pacific shores of Asia, a distance of 4,000 miles. It is the abode of numerous fur-bearing animals.

Between this wooded region and the mountains are the *steppes*, or rolling prairies, which are gay with flowers in the spring, and green with grass in the summer.

They are the home of the roving Tartars, who here find pasturage for their herds.

4. **The Central Region of Desert Plateaus and Mountains** extends from the Red Sea nearly to the Pacific Ocean. It may be divided into two portions, an Eastern and a Western.

The Eastern portion embraces Thibet (*the loftiest plateau on the globe*), with the desert plateaus of Turkestan and Mongolia, and a region of less elevation lying to the eastward and sloping gradually to the sea.

This region is bordered by the Altai Mountains on the north, and the Himalayas on the south, and is traversed east and west by lofty mountain chains.

The HIMALAYAS (*abode of snow*) are the highest mountains in the world. Along their entire length of 1,400 miles they rise far above the line of perpetual snow. Among their many lofty peaks stands the majestic Gaurisankar, or Mount Everest, more than 29,000 feet high.

These mountains present every possible feature of mountain grandeur: peak and precipice, gorge and glacier, rugged ravine and headlong waterfall. They are grander than the Alps, but not so beautiful.

The Western portion comprises mainly the desert plateaus of Arabia and Iran, which are separated from the great northern plain by the Hindoo Koosh and Elburz Mountains.

5. **The Peninsulas** of Asia have a varied surface of tablelands and low mountains, well watered valleys and river plains.

They constitute a region of extreme interest in the history of the world. From Arabia Mohammedan civilization took its origin; from the sacred tongue of the Hindoos (the Sanscrit) Europe has derived its various languages.

India and Indo-China are among the most densely populated portions of the world.

6. **Rivers and Lakes.**—The rivers of Asia are numerous and important.

The most noteworthy are the Ho-ang-ho and Yang-tse-kiang, that flow down the eastern slope of the continent and enter the Pacific, and the Ganges and Indus, the Mekong, Irrawaddy, and Brahmapootra, that descend the southern slope and flow into the Indian Ocean.

These rivers fertilize the plains of China, Indo-China, and India, and furnish water routes for a vast internal commerce.

The principal rivers of Western Asia are the Euphrates and Tigris, that enter the Persian Gulf.

The Obi, Yenisei, and Lena are the chief rivers of the Northern Plain.

The Yenisei, Obi, and Yang-tse-kiang are each more than 3,000 miles in length.

Several of the rivers are subject, like the Amazon, to bores. Those of the

Indus, the Hoogly, and the Brahmapootra are remarkable. That of the Tsien-tang, a small river of China, is the largest in the world. It is sometimes 30 feet high, and rushes up the stream at the rate of 25 miles an hour, sweeping everything before it.

The plateaus and plains of Asia abound with salt lakes. The Caspian and Aral Seas are the largest.

The Caspian is the largest of its kind in the world. It is more than four times the size of Lake Superior.

The Dead Sea, whose surface is more than 1,300 feet below the level of the Mediterranean, is the lowest of these salt lakes.

Of the fresh-water lakes the largest is Lake Baikal. It is 400 miles in length.

Questions.—1. How does Asia compare with the other continents in age? In size? In population? 2. Name its three divisions. 3. Extent of Northern Plain? What is said of the tundras? Forest region? Steppes? 4. Of what does the Central region consist? Its extent? Divisions? Describe the eastern. What is said of the Himalayas? Describe the western portion. 5. Describe the surface of the peninsulas. What makes them interesting? 6. Name the chief rivers of the eastern slope of Asia. Southern slope. What two great purposes do these rivers serve? Name the rivers of Western Asia. Of the Northern Plain. Which are the longest rivers of Asia? How long are they? What is said of the salt lakes? The largest? What is said of the Dead Sea? Of the fresh-water lakes? Name the largest.

LXV. CLIMATE, VEGETATION, RACES.

1. Climate.—The Northern Plain receives the cold winds of the Arctic Ocean. Its winters are long and severe, and its summers short.

Central Asia, between the Altai and Himalaya Mountains, has generally a temperate climate, with the exception of Thibet, which, owing to its elevation, is bleak and nearly uninhabitable.

The great peninsulas of the south, and the desert plateaus of Western Asia have, for the most part, a tropical or hot climate.

2. Moisture.—A glance at the physical map shows that all of Asia west of the Hala Mountains (which form the boundary between the plains of the Indus and the plateau of Iran), and south of the fortieth parallel of latitude, is poorly watered.

This region is mainly occupied by the plateaus of Iran and Arabia, which are inclosed by the mountains that border the coast. These mountains rob the sea-breezes of their moisture, and render the interior plains generally dry and barren.

To the east of the Hala Mountains we find the great peninsulas. They lie in the region of the south-west monsoons, which come from the sea loaded with moisture. Consequently the peninsulas are abundantly watered and exceedingly fertile.

The **Monsoons** are so named from the Arabic word for *season*. For six months, including the winter, the winds come from the interior and are *dry*; these are the north-east monsoons. For the other six months, which are the summer, the winds come from the sea and are *moist*; these are the south-west monsoons. They bring clouds and make the rainy season. The annual rainfall of India varies from 60 inches, at the mouth of the Ganges, to 600 inches among the mountains.

3. Vegetation and Animals.—Beside the difference in amount of moisture, there is also a marked contrast between the vegetation and animals found in the country east and the country west of the Hala Mountains.

COCOA GROVE.

On the east we find the teak, the bamboo, and banyan tree; ebony, cinnamon and other spices; the sweet-scented sandal-wood, cotton, rice, and indigo; the tea-plant and camphor tree of China, the mango, and the banana.

Here also are found, in the dense forests and jungles, the largest animals, such as the elephant, rhinoceros, and tapir, and some of the most ferocious, such as the tiger; serpents of the most venomous kind, and birds, such as the peacock, of the most brilliant plumage.

Thibet is the home of the yak, or grunting ox, which loves to roam above the snow line.

On the west the teak and banyan are replaced by the oak and the ash. The peach, the olive, the fig, and other European tree-fruits, with the vine, the melon, and the rose, are natives of this region.

Among useful animals are found here the camel and the dromedary (called ships of the desert), the horse, the ox, cows, goats, and sheep.

4. Races and Religion.—Asia is occupied mainly by two great races: the Caucasian, which inhabits Western Asia and India, and the Mongolian, which is found in Eastern Asia. The Malays occupy the Malay Peninsula.

The yellow hair, blue eyes, and fair skins of Europeans are replaced in Asia by raven locks, black eyes, and all shades of complexion from tawny and yellow to brown and black.

Asia has been the cradle of all the prominent religions of the world.

Christianity, Judaism, Buddhism, Brahmanism, and Mohammedanism all had their origin within its limits.

The last three are the prevailing forms of religion throughout Asia.

5. National Rank.—The native empires of Asia are the most populous in the world, but there is not one that has risen to importance as a commercial or naval power.

China, with her magnificent sea-front, and a population exceeding that of all the nations of Europe combined, has never been able to command the respect abroad that is accorded even to a third-class naval power of Europe.

6. Political Geography.—Large portions of Asia belong to Russia and Turkey. Not counting these, the countries of Asia may be divided into three groups:

I. The six native independent nations.

These are China, Japan, Persia, Siam, Anam, and Burmah. They are absolute monarchies. With their dependencies they embrace about one-third of the area of Asia, and nearly two-thirds of its inhabitants.

II. Countries belonging to foreign powers, as India, Java, Cochin China.

III. Districts, such as Arabia, Thibet, and Afghanistan, which are occupied by tribes that have no responsible government.

7. Modes of Life and Civilization.—The Hindoos, Chinese, and Japanese have attained a high degree of civilization.

Most of the scattered tribes, however, lead a sort of half-savage, half-civilized life—tending their flocks, robbing their neighbors, and plundering the helpless.

Everywhere throughout Asia woman occupies a degraded position.

Questions.—1. What is said of the climate of the Northern Plain? Of Central Asia? The peninsulas? 2. What portion of Asia is poorly watered? Why? Why are the great peninsulas well watered? What are the monsoons? In what directions and for how long do they blow? What makes the south-west monsoon? (see page 14, paragraph 4)? 3. Name some of the plants found east of the Hala Mountains. Some of the animals. What plants and fruits are found west of these mountains? What animals? 4. What races occupy most of Asia? Where do the Malays live? How do Asiatics differ from Europeans in appearance? What religions have originated in Asia? 5. Has any native Asiatic empire ever been an important commercial or naval power? What is said of China? 6. How may the States of Asia be grouped? How many are sovereign and independent? How much of Asia do they include? Name some of the second group. The third. 7. Which of the Asiatic nations are civilized? What is said of the scattered tribes? Of women?

ASIA
POLITICAL MAP
ATLANTIC OCEAN
ARCTIC OCEAN
NORTH AMERICA
EUROPE
RUSSIAN EMPIRE
CHINESE EMPIRE
JAPAN EMPIRE
PACIFIC OCEAN
INDIAN OCEAN
AFRICA
KARA SEA
BLACK SEA
MEDITERRANEAN SEA
CASPIAN SEA
RED SEA
ARABIA
PERSIA
AFGHANISTAN
TURKESTAN
EASTERN TURKESTAN
MONGOLIA
TIBET
BRITISH INDIA
SEA OF ARABIA
BAY OF BENGAL
Bombay
Madras
CEYLON
Gulf of Aden
OKHOTSK SEA
BEHRING SEA
SEA OF JAPAN
YELLOW SEA
EAST CHINA SEA
SOUTH CHINA SEA
Hong Kong
PHILIPPINE ISLANDS
CELEBES SEA

MAP STUDIES.

POLITICAL ASIA.

Countries.	Area in Sq. Miles.	Population.	Countries.	Area in Sq. Miles.	Population.	Countries.	Area in Sq. Miles.	Population.
Chinese Empire	4,539,730	434,570,000	Japan	146,610	33,623,373	Persia	450,000	11,299,500
Indo-China: Anam	196,000	21,000,000	British India	1,467,695	242,534,631	Arabia (est.)	920,000	4,000,000
Indo-China: Burmah	190,000	4,000,000	Afghanistan	278,600	4,000,000	Asiatic Turkey	710,120	16,000,000
Indo-China: Siam	274,000	6,750,000	Beloochistan	106,800	350,000	Asiatic Russia	5,029,430	13,337,962

General Questions.—What empire occupies a large part of Eastern and Central Asia? What country occupies most of Northern Asia? What country occupies the great southern peninsula? What countries the south-eastern peninsula? What three countries border on the Persian Gulf? What two to the east of Persia? What similar empire off the eastern coast?

Chinese Empire.—What mountains and river on the north? What mountains on the west? The south? In what portion of the empire is China? Thibet? Turkestan? Mongolia? Mantchooria? What structure forms part of the northern boundary of China? What are the principal mountain ranges in China? What two large rivers traverse China? How are they connected? What island and port at the mouth of Si-kiang River belonging to Great Britain? What city north of Hong Kong? What city at the mouth of the Yang-tse-kiang? What triple city on this river? What can be said of the Yang-tse-kiang? Ans. *It is the great commercial highway of China. Ocean steamers ascend it 700 miles to Hankow and there load with tea. It is navigable for small vessels 1,500 miles higher up. In the upper part of its course there are dangerous rapids.* How do the Chinese pass them? Ans. *By tracking or towing. From 30 to 300 men are required to pull each boat against the violent current. Many wrecks occur.* What is the capital of the empire? On what river? What is the capital of Thibet? The chief towns in Turkestan? Chief place in Mongolia? Capital of Mantchooria? Of Corea?

Japan. What are the principal islands occupied by the Empire of Japan? Which is the largest? What sea and strait separate Japan from the mainland? What is the capital? What city south of Tokio? (*This is the port of Yokohama.*) On what island is Kioto? Osaka?

Indo-China.—What countries occupy the region lying between China and the Strait of Malacca? Where is Burmah? Siam? Anam? To what European power does Cochin China belong? What European power owns a narrow strip of land bordering on the Bay of Bengal? Where is Cape Romania? Capital of Burmah? Siam? Anam?

British India.—What great mountain range forms most of the northern boundary? What mountains the western boundary? What sea on the west? Gulf on the east? What great river drains North-western India? What is meant by the Punjab? Ans. *The region of the five streams* from the Indian words for *five* and *stream*). What five rivers are meant? Ans. *Those which form the Indus.* What two great rivers drain the North-eastern portion of India? What are the principal rivers of the Deccan? Where is Cape Comorin? Where is Nepaul? Bhotan? Cashmere? Name the capital of India. Where is Madras? Bombay? Benares? Delhi? Surat? Where is Ceylon? What is the capital?

Afghanistan and Beloochistan.—What mountains border these countries on the east? What traverse the northern part of Afghanistan? What sea on the south? What are the capital and chief towns of Afghanistan? What is the capital of Beloochistan?

Persia.—What sea on the north? What gulfs and strait on the south? What mountains in the northern part? In the south-western? What is the capital? Where is Ispahan? Meshed? Tabriz? What port on the Persian Gulf?

Arabia.—What is the form of Arabia? What waters nearly surround it? What country includes the northern portion? What state occupies the south-eastern coast? What is its capital? Where is Hayel? Riad? Aden?

Turkey.—On what seas and gulf does Turkey border? What two provinces in the Arabian peninsula belong to Turkey? What noted mountain at the head of the Red Sea? What strait at the entrance of the Red Sea? Is the capital of Turkey in Asia? What is it? Where is Smyrna? What city on the Tigris? On the Mediterranean? Where is Damascus? Jerusalem? Medina? Mecca? Mocha? What comes from this port? Ans. *The best coffee.*

Asiatic Russia.—What ocean on the north? What seas on the south-east? What mountains on the south? On the west? What are the two great divisions of Asiatic Russia east of the Caspian Sea? What one west? Where is Lake Balkash? Sea of Aral? Some of the rivers have no drainage into the ocean, but are inland. Into what does the Ural flow? The Amur? The Sir Darya? Where is Tobolsk? Kiatka? Khokand? Bokhara? Irkutsk? Tiflis? Omsk? Tomsk? Barnaul? Kutchta? Where is Nova Zembla? What is south of it? Where are the New Siberia Islands? (*These possess large deposits of fossil ivory.*)

LXVI. CHINESE EMPIRE.

1. The Chinese Empire occupies the central part of Eastern Asia. It includes China, Mongolia, Mantchooria, Thibet, Eastern Turkestan, Soongaria, and Corea, and embraces an area larger than the entire continent of Europe.

The estimated population is over 400,000,000. It is chiefly Mongolian.

2. **China.**—China consists of the great plains of the Hoang-Ho and the Yang-tse-kiang, together with adjoining mountain regions. The climate is varied, and resembles that of our own country. The soil is fertile.

China is one of the oldest and most densely populated countries in the world.

The land is tilled to overflowing with people. For want of dwelling space near large cities, no less than three millions of the people live in boats, which are arranged in streets on the rivers, as houses are on the land. Every available bit of land is under cultivation.

3. **Mineral Wealth.**—The Chinese coal-beds are among the most extensive in the world. Iron and salt, gold, silver, copper, quicksilver, lead, zinc, and precious stones abound. The deposits of porcelain clay are very large.

4. **Pursuits and Productions.**—Of all pursuits agriculture is the most honored by the Chinese.

To do it homage, the Emperor, every New-Year's-Day, puts his hand to the plough and runs a furrow.

TEA is the great agricultural staple.

Tea is the leaf of an evergreen shrub that grows about five feet high. The leaves are picked by hand, rolled, and dried. The laborers are paid a cent or two a day.

Cotton and the mulberry tree are extensively cultivated. Rice and millet are the chief articles of food.

The manufactures of China include silk, cotton, calico, and porcelain.

Great use is made of the bamboo in building houses, boats, and bridges, and in making furniture and household utensils.

The Chinese are extensively engaged in sea fisheries.

COMMERCE.—China has a vast internal commerce.

This is carried on over 30,000 miles of rivers, and by means of numerous canals and navigable rivers. In the mountain districts donkeys are used, and in crossing the deserts the camel.

China is rapidly enlarging its foreign intercourse.

In former times the laws of China excluded all foreigners from the country. For a long time only the single port of Canton was open to foreign trade. The government has since opened twenty-four ports, recently that of Hankow on the Upper Yang-tse-kiang, in the very heart of the empire.

There is a great caravan trade between China and Russia, which has its rendezvous at Maimatchin.

The principal exports are tea and raw silk.

5. **People.**—The Chinese are industrious, patient, economical, and ingenious.

They invented gunpowder and the mariner's compass, and have understood the art of printing, paper-making, and manufacturing "China" ware for ages. Their skill in the carving of ivory is marvellous.

The most famous public works are the grand canal, 500 miles in length, connecting Peking and Hangchow; and the great wall, 1,200 miles in length, from 15 to 30 feet high, and so thick that six men can march abreast on the summit.

The latter was designed as a barrier against the Tartars, and was completed upward of two hundred years before the birth of Christ.

6. **Government and Religion.**—The government is an absolute monarchy. The country is the "Celestial Empire," and the emperor, according to the Chinese, is of such high descent as to be brother of the sun and moon. The laws are severe. The chief religion is Buddhism.

7. **Education** is eagerly sought for by all classes, because all government offices are the rewards of scholarship. They are given to the successful competitors in public examinations.

8. **Cities.**—China contains more large cities than any other country in the world.

They are compactly built, and the streets are narrow. The temples and pagodas are very grand.

Peking, about 100 miles from the sea, is the capital, and one of the largest cities of the empire.

There are three cities in China on the Yang-tse-kiang so closely connected that they form one city, under the name of Hankow, with a population of nearly 1,000,000.

It is famous for its learning, its manufactures of metal, and its export of tea.

Foochow is the centre of a large tea trade, and of cotton manufacturing.

Nanking is the chief seat of learning.

Shanghai and Canton, the principal seaports, have an immense commerce.

Ki-ang-te-chang is the greatest porcelain factory in the world. It employs one million operatives. Nanking is famed for the beauty of its buildings and gardens. Chang-sha is the centre of the silk business.

9. **Mantchooria** is one of the richest dependencies of China.

Its hills are covered to their summits with luxuriant vegetation; its valleys yield abundant crops of wheat, maize, and millet, cotton and potatoes. Coal and peat abound.

The inhabitants are chiefly engaged in agriculture and trade.

In the northern portion the people are nomadic, and devoted to the rearing of cattle.

Moukden, the capital, is a large city.

10. **Mongolia** is an arid region, embracing the larger part of the Desert of Gobi.

It is peopled by Mongols, who are nomadic. They wander from one fertile spot to another seeking pasturage for their flocks. The caravans between China and Western Asia pass over this dreary desert.

11. **Thibet** occupies the highest part of the central plateau of Asia, and is a cold country.

The scanty population live chiefly in the low valleys, where they find pasturage for their vast herds of cattle and flocks of sheep and goats.

Lassa, the capital, is the residence of the Grand Lama, or head of the Buddhist religion, and is the chief seat of the Buddhist worship. It has an extensive trade in precious stones.

12. **Eastern Turkestan** is a plateau lying between the Kuenlun and Thian Shan Mountains.

Its interior is largely barren, and forms part of the desert of Gobi, but at the base of the mountains are fertile regions which yield good crops of cotton, grain, and fruits.

Kashgar and Yarkand are important centres of caravan trade.

Here the merchants of China and those of Western Asia meet and exchange their goods.

13. Soongaria lies between the Altai and Thian Shan Mountains.

The valleys are suited to grazing and agriculture. Some of the caravan routes between China and Western Asia pass through Soongaria.

14. Corea is a fertile and populous country, tributary to China. Kingkitao is the capital.

Corea is little known, because its policy generally is to exclude foreigners. It has a large trade with China and Japan, chiefly in ginseng root and furs. Ginseng grows in many parts of the United States. Its root is supposed by the Chinese to be a remedy for almost all diseases.

Questions.—1. What part of Asia does the Chinese Empire occupy? What does it include? Area? Population? 2. Of what does China consist? What of its climate? Rank of China among the countries of the world in age and population? What is said of the boat population? Cultivation of the soil? 3. Mineral wealth? 4. How is agriculture honored? Great staple? Other agricultural products? Chief articles of food? Principal manufactures? Use made of bamboo? What is said of internal commerce? Foreign intercourse? Caravan trade? Principal exports? 5. Character of people? Inventions? Famous public works? 6. Government? What is the country called? Religion? 7. Education? How are public offices assigned? 8. What of the large cities of China? Peking? Hankow? Foo-chow? Nanking? Shanghai? Canton? King-te-ching? Suchow? Changsha? 9. Manchooria? Products? Occupations? Capital? 10. What is said of Mongolia? 11. Situation of Thibet? What is said of the population? Capital? 12. What is said of Eastern Turkestan? Kashgar and Yarkand? 13. What is said of Soongaria? 14. Corea?

LXVII. JAPAN.

1. The Empire of Japan consists of four large islands, Hondo or Niphon, Kiusiu, Shikoku, and Yezo, and numerous smaller islands.

Its area is a little larger than that of the British Islands, and the population about the same.

The coasts are generally bold and rocky, and abound in convenient harbors.

The country is mountainous, and in many places volcanic.

Fusiyama, with its majestic cone of snow, is an extinct volcano 14,000 feet above the sea. It is an object of veneration with the lower orders.

Near Kiusiu there is a small islet with a burning volcano, which answers the purpose of a light-house.

2. Mineral Resources.—Japan, like China, is rich in mineral resources. Gold and silver, iron and lead are found, and coal is obtained in large quantities.

Mineral springs abound.

3. Climate.—The climate resembles that of our Atlantic seaboard, though it is somewhat milder, owing to the insular position of Japan.

At Tokio the summer temperature ranges from 70° to 90°; in winter the snow seldom lies long.

4. Productions.—The principal crops are rice and tea. Rice is the chief article of food.

Among the productions are the tree from which the Japanese get the gum for their beautiful Japan-ware, the wax-tree, from which they get a kind of wax for their candles—the manufacture of which is an important industry—and the paper mulberry, from which they manufacture their paper.

The chief exports are silk, tea, lacquer-ware, and camphor.

5. People.—In commerce, manufacturing, and general enterprise the Japanese are the most progressive of the Mongolian race. Since 1854 they have opened eight of their ports, called the "Treaty Ports," to foreign trade and residents. Steamers ply regularly between San Francisco and Japan.

In the manufacture of porcelain and steel the Japanese are equal to any nations in the world; their silk and other fabrics are of superior excellence and beauty; and numerous varieties of paper are made by them, many of which are very beautiful.

They have adopted the military system of Europe, and introduced post-offices, railways, and telegraphs.

6. The government is an absolute monarchy. The "Mikado," however, is aided by a Great Council, over which he presides.

7. Education.—Within a few years public schools have been established throughout the empire, and the education of the boys is universal and compulsory.

The Japanese used the art of printing long before it was invented in Europe. They have a literature of great antiquity and repute.

Large numbers of Japanese students are being educated in Europe and the United States.

8. Religion.—The people are chiefly Buddhists.

Many of them, however, have been converted to Christianity.

9. Customs.—Many curious customs prevail.

Owing to the fact that the country is volcanic, the dwellings are generally of wood. They are all built according to one of three or four plans; so that, in furnishing a house, you have only to go to the upholsterer and order carpets or mats for a house of one of these patterns.

The Japanese have no chairs, sofas, or beds; but, using their clothes for covering, they sleep on the floor, upon the mats on which they sit during the day.

10. Cities.—The cities of Japan are numerous. Tokio, or Yedo, the present capital, is the largest city and commercial metropolis.

Kioto is the chief seat of learning. Osaka is surrounded by its subdivisions the Paris of Japan.

Yokohama is the most important port of the empire. Hakodadi is the principal port of Yezo. Nagasaki is the port where Europeans were first permitted to reside as merchants.

Questions.—1. Of what does Japan consist? Area? What of the coasts? Surface? Volcanoes? 2. Mineral resources? 3. Climate? 4. Principal crops? Chief article of food? Other productions? Exports? 5. Character of people? Foreign trade? Manufactures? What have they introduced? 6. Government? 7. Education? Art of printing? Literature? 8. Religion? 9. Customs? 10. Cities? What of Tokio? Kioto? Osaka? Yokohama? Hakodadi? Nagasaki?

LXVIII. INDO-CHINA.

1. Indo-China occupies the south-eastern peninsula of Asia.

It includes the empires of Anam and Burmah, the kingdom of Siam and other smaller States. The western coast of Burmah belongs to Great Britain, and constitutes British Burmah.

During the prevalence of the south-west monsoon the sea is blown so violently that the shores of Indo-China are inundated.

There is also an immense fall of rain, causing an overflow of the rivers. The forests are then being dyed.

NATIVES OF THE FORESTS OF INDO-CHINA.

2. **Minerals.**—These countries are rich in minerals, including gold, tin, lead, copper, and zinc.

The tin mines of the Malay peninsula and the neighboring islands furnish nearly one-half of the world's supply of tin. The ruby mines of Burmah, which also yield sapphire, are very celebrated.

Petroleum springs are common, and seem inexhaustible.

3. **Productions.**—Rice, indigo, cotton, the sugar-cane, tobacco, and the mulberry are extensively cultivated. The chief article of food is rice.

In the forests are found the valuable teak, the *Upas*, which yields gutta-percha, the tree also which yields gamboge, with other dye-woods, cinnamon-trees, and the sweet-scented eagle-wood, which is burned as incense in the heathen temples. Oil-trees, from a single trunk of which many gallons of oil may be extracted, abound in Burmah.

The exports are rice, sugar, tobacco, and cinnamon.

The commerce of Indo-China is carried on chiefly with China and Japan.

4. **Animals.**—The elephant, tiger, rhinoceros, leopard, and buffalo are all found wild in great numbers. The waters are alive with alligators, the forests with monkeys.

The elephant is used as a domestic animal. Among the Burmese a white elephant is one of the dignitaries of the State. He has his palace, and takes rank next after royalty.

5. **Government and Religion.**—The governments are despotic. In religion the people are chiefly Buddhists.

In industry and inteligence they are very inferior to the Chinese on the one side and the Hindoos on the other.

They resemble the Chinese in manners and customs.

6. **Cities.**—Bankok is the capital of Siam, and the largest city on the peninsula.

Vast numbers of its inhabitants live in bamboo huts floating on rafts in the river.

Mandalay, on the Irrawaddy, is the capital of Burmah, and Hue (*hwa*), of Anam.

7. **Lower Cochin China** is a possession of France. Its capital, Saigon, is a fortified town of some commercial importance.

8. **The Malay Peninsula** is divided into several petty States, thinly peopled and badly governed.

The Malays are a piratical people, dreaded by all unarmed sailing vessels.

Questions.—1. What does Indo-China occupy? What does it include? What is said of the monsoon and the rainfall? 2. Minerals? The tin mines? Precious stones? Petroleum? 3. Principal productions? Chief article of food? Forest products? Silk-trees? Exports? Commerce? 4. Animals? Elephant? 5. Government? Religion? Manners and customs? 6. What is said of Bankok? Mandalay? Hue? 7. Of Lower Cochin China? 8. The Malay Peninsula? The Malays?

LXIX. BRITISH INDIA.

1. British India comprises the great peninsula of Southern Asia, together with British Burmah, the island of Ceylon, and other islands in the Indian Ocean.

2. **Physical Features.**—On the northern border we find the vast range of the Himalaya Mountains.

At their southern base lie the great plains of the Indus and Ganges, one of the richest and most populous regions in the world.

Still further to the south rises the plateau of the Deccan.

3. **Productions.**—The mineral wealth of India is not large.

Iron, gold, and precious stones are, however, found in considerable abundance.

The great productions of the country are agricultural. They are rice and cotton, jute, silk, opium, indigo, tea, sugar, and spices.

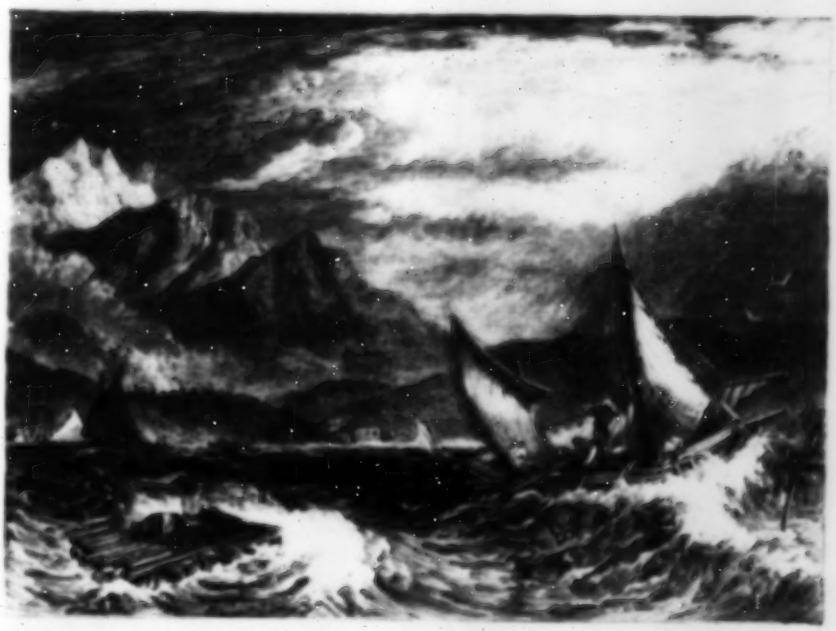
Rice is the chief article of food. Two crops are raised every year.

India is one of the great cotton-growing regions of the world. This staple is the principal material for clothing.

Opium is made from the poppy, and the cultivation of this plant is an important branch of industry. It is largely chewed and smoked by the Chinese, Japanese, and the inhabitants of the East India Islands. The entire proceeds of the tea crop are said to be insufficient to pay for the opium annually brought into China and consumed there.

Jute is used in making gunny-bags in which many of the products of India are packed. It is also largely used in Europe in the manufacture of carpets.

4. **The commerce** of India is immense. A great maritime trade is carried on with England and China, and an important caravan traffic with Central and Western Asia.



Internal commerce is rapidly developing by the aid of the railways that connect the principal cities and seaports. The large rivers are navigated by steamers.

The country is traversed by a network of navigable and irrigating canals, many of which are hundreds of miles in length.

The exports are cotton, jute, rice, flax, tea and sugar, coffee, tobacco, opium, indigo, gums, spices, drugs, wheat, shawls, and carpets.

For ages the trade of India was the trade of the world. The English East India Company, having grown rich and powerful through its monopoly of this trade, achieved the splendid conquest which gave to England this most valuable of her possessions.

5. **The inhabitants** number nearly 250,000,000. They are generally known as Hindoos, though there is great diversity of race, language, manners, and customs among them.

They are remarkable for their skill in the manufacture of textile fabrics. The muslins of Dacca, the brocades of Benares, the embroidery of Delhi, often rivalled the products of the finest modern machinery. The shawls of Cashmere are still unsurpassed.

About one hundred years ago India was the seat of an empire of vast wealth and splendor. Its wonderful antiquities and magnificent ruins, its extraordinary poetical and religious literature, tell in eloquent language of the grandeur of the past.

European civilization is now rapidly extending over the country.

The leading religions are Brahminism and Mohammedanism.

6. **Government.**—The Queen of England is "Empress of India."

The country is divided into the Presidencies of Bengal, Madras, and Bombay, each of which has a British Governor or President, subject to a Governor-General and Supreme Council appointed by the British Government.

7. **Cities.**—Calcutta, the capital and residence of the Governor-General of India, is the chief commercial city.

Bombay is noted for its splendid harbor. It is the great cotton port. Madras is an important *entrepôt* of foreign trade.

Murshedabad manufactures silks, carpets, and embroidery.

Patna is the emporium of the trade in opium, indigo, and rice.

Benares, with its thousand Hindoo temples and more than 300 mosques, is the most sacred city of the Hindoos, and their chief seat of learning.

The Jumna and the Ganges are sacred rivers. They meet at Allahabad, God's Home, where multitudes of pilgrims go to bathe.

Delhi was the capital of the ancient Mogul sovereignty. Its ruins cover 42 square miles. It has a large trade in jewelry and cotton goods.

Lucknow, with its monuments, domes, and airy palaces is like a fairy city.

In quelling the Indian mutiny of 1857, the heroic Havelock made it famous in Anglo-Indian history.

8. **Cashmere, Nepaul,** and **Bhotan,** on the slopes of the Himalayas, are native principalities.

Cashmere is celebrated for its floating gardens, its roses, and its fine shawls woven from the wool of the Cashmere goat.

It contains the celebrated "Vale of Cashmere," an upland valley of surpassing beauty surrounded by lofty mountains, and closely resembling the "Parks" of our Rocky Mountain region.

9. **British Burmah** is a narrow strip of land on the western coast of Indo-China.

Its productions resemble those of India. Teak timber is the leading export. Rangoon is the chief commercial town.

10. The "**Strait Settlements**," consist of Malacca, Penang, and Singapore.

Singapore is the leading tin market of the world. It is an English town on an island at the end of the Malay peninsula. Its fortifications command the strait of Malacca, which is the great thoroughfare for steamers that ply between India and China.

11. **Ceylon** is a fertile and populous island, famous for its coffee, its pearl fisheries, and its cinnamon groves.

Coffee is the most important production. Pearls are found inside the shell of the "pearl-oyster," which lives in water from 30 to 60 feet deep. It is sometimes 12 inches in diameter. Divers descend to the bottom and gather the oysters. The best divers will remain 87 seconds under water. Cinnamon is the bark of a kind of laurel. The cinnamon and coffee-tree both grow wild upon the island.

Ceylon has a colonial government separate from that of India. Colombo is the capital and chief seaport.

Questions.—1. What does British India comprise? 2. Physical features? 3. Is the mineral wealth great? What are the great products? What of rice? Cotton? Opium? By whom used? Jute? For what used? 4. Maritime commerce? Caravan trade? Internal commerce? Canals? Chief exports? What of the East India Company? 5. Inhabitants? What is said of their skill in making textile fabrics? Condition of India ninety years ago? Present? Religions? 6. Government? How is the country divided? 7. What is said of Calcutta? Bombay? Madras? Murshedabad? Patna? Benares? Allahabad? Delhi? Lucknow? 8. What of the native principalities? Of Cashmere? 9. British Burmah? Productions? Capital? 10. Strait Settlements? What of Singapore? 11. Ceylon? Products?

LXX. AFGHANISTAN, BELOOCHISTAN, PERSIA, AND ARABIA.

1. **Afghanistan and Beloochistan.** Afghanistan and Beloochistan occupy the *eastern* portion of the Plateau of Iran, and are for the most part desert.

Some of the mountain valleys are, however, well watered and fertile.

These valleys are inhabited by a settled population, but the country generally is peopled by warlike nomads, some of whom resemble the Highlanders of Switzerland and Scotland.

The chief caravan routes between India and Western Asia lie through this region, which is separated from India by the Suleiman and Hala mountains.

The two great passes through these mountains, the Peshawar Pass leading to Cabul, and the Bolan leading into Beloochistan, may be called the north-western gates of India.

The Bolan Pass is a wild gorge about 50 miles long, walled in by precipitous rocks. In 1839 a column of the British army took six days to traverse it.

The principal depots of the caravan trade are Cabul, Herat, Kandahar, and Kelat. Cabul is the capital of Afghanistan, Kelat of Beloochistan.

2. **Persia.**—Persia occupies the *western* part of the Plateau of Iran.

It is a dry country, requiring for the most part artificial irrigation; but wherever there is "the scent of water" the little hills rejoice on every side, the valleys are clothed with waving corn or fragrant roses, and the pastures are covered with flocks and herds.

Water is conveyed to the plains from the mountain springs or streams by long underground aqueducts called *kanats*.

The climate of Persia generally is one of great extremes. The summers are intensely hot, the winters bitterly cold. The region bordering the Caspian Sea has a comparatively mild climate.

3. **Productions.**—Silk is the most important production. The other products are cotton, tobacco, opium, drugs, wool, and wine, and of minerals, naphtha, salt, and the turquoise.

The artisans of Persia are skilled in various branches of industry, especially in the manufacture of silks, shawls, carpets, and small-arms.

The chief exports are silk and silk-worm eggs, opium, carpets, and perfumery.

In these dry countries the fruits, such as grapes, peaches, pears, apricots, nectarines, plums, cherries, figs, pomegranates, and melons—both canteloupes and watermelons—are of unsurpassed beauty and flavor.

4. **Government.**—Persia is one of the oldest monarchies in the world. The ruler is called the Shah, and is a Mohammedan.

Western civilization is finding its way into this country. Telegraphs and post-offices have been introduced.

5. **Cities.**—Teheran is the capital. Tabriz is an important *entrepôt* of caravan trade between Persia and India on the one hand, and Turkey and Russia on the other.

Ispahan, once populous and magnificent, is now going to decay.

Meshed, the holy city, manufactures carpets and shawls; Bushire is the chief port on the Persian Gulf.

6. **Arabia.**—Arabia is a great plateau. It has three nearly equal divisions: I. A central mountainous region; II. A desert belt encircling this; III. A narrow coast plain.

Central Arabia contains many populous towns and villages. Its valleys are exceedingly productive.

The desert belt has a scanty vegetation which furnishes food for the goats and camels of the Bedouin or wandering Arabs. Here and there groves of date-palm mark the fertile spots, or oases. The desert is often swept by the dry scorching wind called the Simoom.

The coast plain contains fertile districts which yield coffee, dates, figs, grapes, fragrant gums, and spices in great profusion. This region was anciently called Arabia the Blest.

The exports are coffee, dates, camels, horses, pearls, and wool.

Off the island of Bahrein, in the Persian Gulf, is one of the most noted pearl fisheries in the world.

7. **Government.**—Arabia is divided into petty states under separate rulers.

Nedjed, Shomer, and Oman are the most important. Riad, Hayel, and Muscat are their capitals.

Yemen and Hedjaz, on the western coast, are fertile districts. They are Turkish provinces.

Hedjaz contains the holy cities of the Mohammedans—Mecca, the birthplace of "the prophet," and Medina, his burial-place.

Every Mohammedan tries to make a pilgrimage to these cities once in his life. Enormous caravans visit them every year. The pilgrims come from motives of religion and commerce. Traders from various Mohammedan countries meet at Mecca and exchange their commodities.

Sana is the capital. Mocha is famed for its coffee. Muscat is an important centre of commerce.

Arabia contains Mount Sinai.

Questions.—1. What countries occupy the *eastern* part of the Plateau of Iran? Describe the country and inhabitants. What is said of the caravan routes? Of the mountain-passes? Bolan Pass? Name chief cities. 2. What country occupies the *western* part of Iran? Describe it. What are kanats? Climate? 3. Productions? What of the artisans of Persia? Chief exports? Fruits? 4. Government? Modern civilization? 5. What is said of Teheran? Tabriz? Ispahan? Meshed? Bushire? 6. What is Arabia? Natural divisions? What of Central Arabia? Desert belt? Coast plain? How much of the country does each division occupy? Exports? For what is Bahrein noted? 7. How is Arabia governed? Principal states? Capitals? What of Yemen and Hedjaz? Mecca? Medina? Pilgrimages? Sana? Mocha? Muscat?

LXXI. ASIATIC TURKEY, ASIATIC RUSSIA.

1. Asiatic Turkey.—Asiatic Turkey includes Asia Minor, Armenia, Syria, the low plains of the Tigris and Euphrates, and the western coast of Arabia.

These constitute the most important part of the Turkish Empire.

Asia Minor, Armenia, and Syria contain valleys of great fertility, where the vine, the olive, and the mulberry, poppy, cotton, wheat, tobacco, and fruits grow abundantly.

The great river plains are covered with vegetation during the rainy season, but become dry and barren during the summer.

Asiatic Turkey has great natural resources. Powerful empires once flourished here. An oppressive government is the chief obstacle to prosperity.

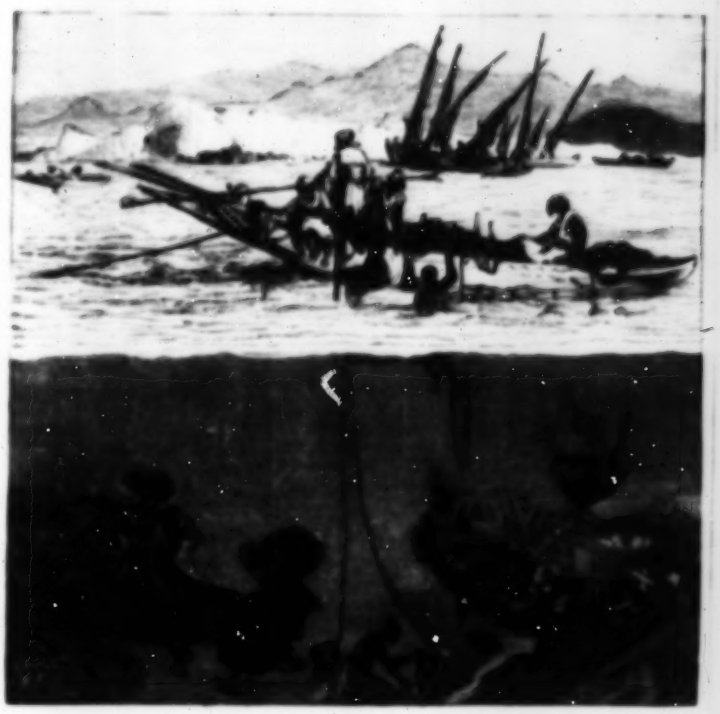
The leading exports are olive oil, opium, tobacco, figs, perfumery, raw silk, wool, carpets, and leather.

The caravan trade is extensive.

2. Government.—Each province is governed by a Pasha appointed by the Sultan.

The inhabitants are Mohammedans, Christians, Jews, and Gypsies.

3. Syria contains Palestine, or the Holy Land. Jerusalem, the Holy City, is sacred to Christians, Jews, and Mohammedans.



SPONGE FISHERIES ON THE COAST OF SYRIA.

Sponge and coral fisheries on the coast of the Mediterranean are important sources of Syrian commerce.

Sponges are animal productions, living in water from 30 to 120 feet deep, and attached to rocks or sea-shells. They are gathered by divers.

Smyrna is the great commercial port of Asiatic Turkey. Damascus, the oldest city known, and Bagdad, are centres of a great caravan trade. Beyrout is the port of Damascus.

Aleppo is a great rendezvous of caravans from Persia and India. Brusa is an important emporium.

4. Asiatic Russia.—Asiatic Russia embraces all of northern Asia, and extends from the Black Sea to the Pacific Ocean.

It includes Siberia, Trans-Caucasia, and Russian Turkestan.

5. Siberia.—Siberia is larger than all Europe, while its population does not equal that of Scotland.

The climate in the *north* is intensely cold, and in some parts the mercury is frozen for two months in the year.

The *central* region consists of a part of the great forest belt which extends from the Baltic Sea to the Pacific. It abounds in fur-bearing animals.

In the *southern* portion the climate is milder, and in the valleys agriculture is successfully carried on.

Here are found vast numbers of sheep, horses, cattle, and camels. Grain is raised in large quantities.

The Ural and Altai mountains are rich in emeralds and rubies, gold, silver, copper, and iron.

The population consists largely of Russian exiles and their descendants. The mines are worked chiefly by them.

The steppes in the south are occupied by roving Kirghiz; the north by tribes who, like our Esquimaux, are in the lowest state of barbarism.

The exports are furs, the products of the mines, and fossil ivory, which is found all over Northern Siberia.

Trade Route.—An extensive trade is carried on between Peking and St. Petersburg through Siberia. It passes over the longest inland trade route in the world. The supply of tea for Russia is transported on the backs of camels from Peking to Maimatchin and Kiachta, and thence through Irkutsk, Tomsk, and Tobolsk to St. Petersburg by boats on the rivers in the summer, and in the winter by sledges drawn by dogs or reindeer. The transit occupies six months.

Irkutsk is the seat of government, and a place of great trade.

Barnaul is a great mining town containing 120 furnaces. Tiumen is extensively engaged in the manufacture of Russia leather and woollen fabrics. Omsk, Tomsk, and Tobolsk are important towns.

6. Trans-Caucasia, formerly Georgia, lies on the south side of the Caucasian Mountains.

The valleys are fertile. The principal products are the mulberry, the vine, and cotton.

The people are celebrated for their handsome features. They belong to the Tartar race. Tiflis is the capital and chief city.

Baku is famous for its wells of petroleum, which is used as fuel by the steamers on the Caspian.

7. Russian or Western Turkestan embraces the larger portion of the territory lying between the Caspian Sea and the Altai Mountains. The only fertile sections are the valleys.

Bokhara is an immense thoroughfare for caravans trading between Persia and China. It is noted also for the number of its mosques and schools.

Questions.—1. What does Asiatic Turkey include? What do these constitute? What are the products of the valleys? What is said of the river plains? Why is not Turkey prosperous? Leading exports? Caravan trade? 2. Government? Inhabitants? 3. What does Syria contain? Products of the sea? What is said of sponges? Smyrna? Damascus? Bagdad? Beyrout? Aleppo? Brusa? 4. What does Asiatic Russia embrace? Divisions? 5. Area of Siberia? Climate of northern portion? Central? Products of the forest belt? Climate of southern portion? Products? Mineral wealth of the mountains? Of whom does the population largely consist? Occupation? Who occupy the steppes? Who the Arctic region? Exports? Describe the great trade route to China. What is said of Irkutsk? Barnaul? Tiumen? Name other important towns. 6. Where is Trans-Caucasia? Former name? What of the products? People? Tiflis? For what is Baku famed? What use is made of the petroleum? 7. What can you say of Turkestan? Of Bokhara?

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AFRICA.

MAP STUDIES.

PHYSICAL AND POLITICAL AFRICA.

	Area in Sq. Miles	Population		Area in Sq. Miles	Population
Egypt and Dependencies	1,406,200	16,952,000	Tunis	42,000	2,100,000
Abyssinia	158,000	300,000	Tripoli	344,000	750,000
Morocco	219,000	2,750,000	Liberia		720,000
Algeria	198,000	2,867,000	Cape Colony	347,[illegible]	1,420,000
			Madagascar	240,000	2,100,000

Outline.—What sea on the north? On the north-east? What isthmus between these two? What is the most northern point? Eastern? Western? Southern? What other cape near this last? Why was it so called? Ans. *When first discovered, it was thought to be the southern end of Africa, and thus gave "good hope" that India might be reached by a sea route.* What groups of islands off the north-west coast? What celebrated peak in the Canaries? Ans. *The Peak of Teneriffe, a volcano 12,182 feet high. The winds at the top and bottom of the peak often blow in contrary directions. These are the upper and lower currents of the trade-wind.* What gulf on the western coast? What large island on the south-east? What channel separates it from the mainland?

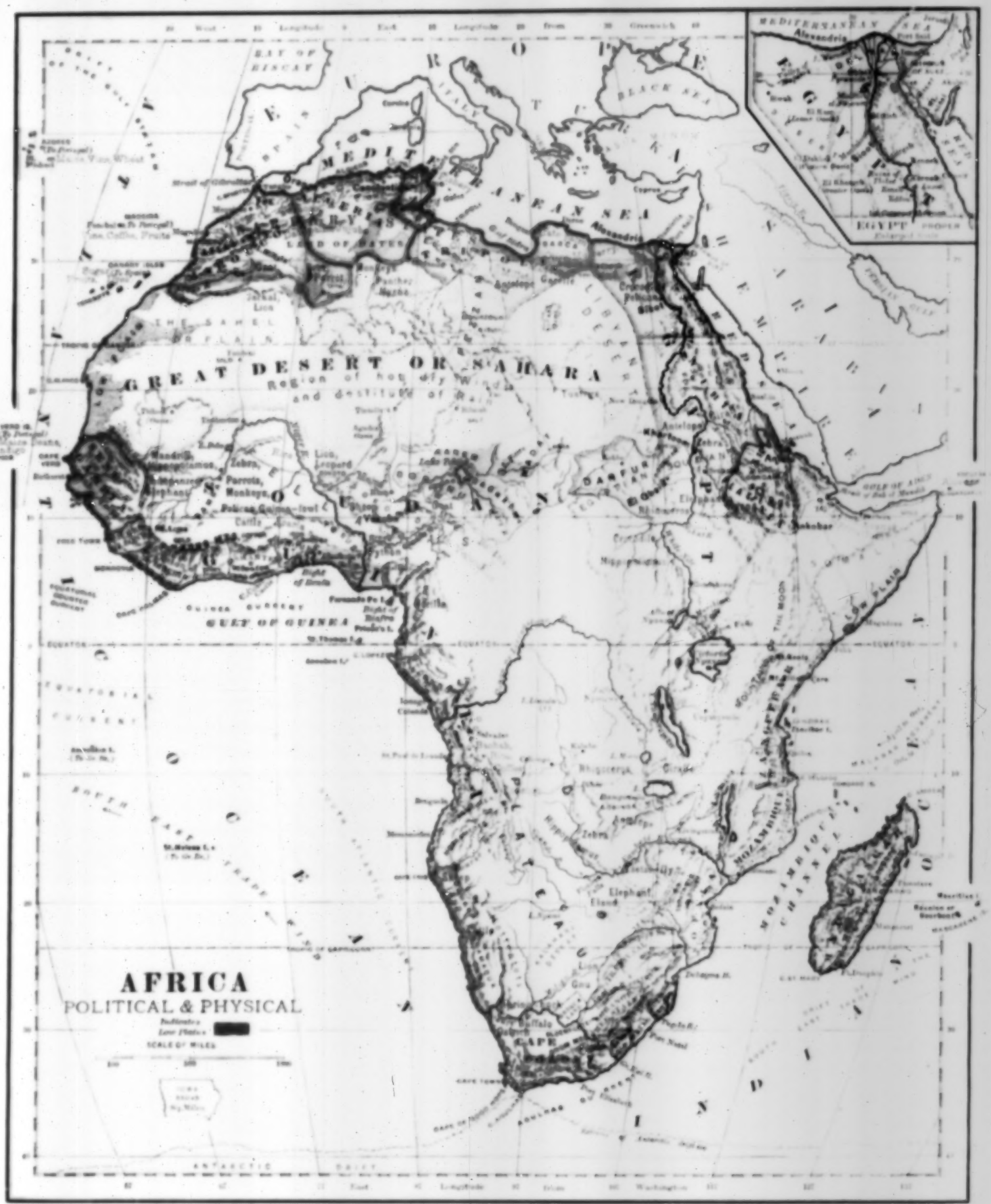
Surface.—Where are the Atlas Mountains? What is their general direction? What mountains north of the Gulf of Guinea? What mountains in the south? What important range east of the Great Lakes? Name two principal peaks. (*These are nearly under the Equator. They are clad in perpetual snow.*) Where are the Cameroons Mountains? What deserts in Africa? By what circles are they crossed?

Lakes and Rivers.—What great lakes on and near the Equator? Where is Tanganyika? Lake Tchad? Has it any outlet? What great river drains North-eastern Africa? What are its principal tributaries? What river drains Western Soudan and enters the Gulf of Guinea? By what river are the regions west of the Great Lakes drained? (*The recent explorations of the heroic Stanley have given us the only exact knowledge we possess of the course of this stream. He found the banks covered with a rich vegetation and thickly populated. In times of flood its turbid waters discolor the ocean 100 miles out at sea.*) What is the great river of South-eastern Africa?

Climate.—What is the climate of North Africa? Of the southern extremity? What winds blow over tropical Africa? Ans. *The north-east and south-east trades.* Which bring moisture? Ans. *The south-east.* Why? Ans. *Because they come from the warm Indian Ocean. They feed the great lakes Victoria Nyanza and Albert Nyanza, which are drained by the Nile.* Why are the north-east trades dry? Ans. *Because they come from the continent of Asia.*

Vegetation, Animals, and Minerals.—Name the principal vegetable productions of the Barbary States. Can you mention some of the uses of the date-palm? Ans. *It furnishes timber and food, as well as fibre from which clothing and rope are made. It is as useful to the people of Africa as the bamboo is to the Asiatics.* What are the staple productions of Egypt? Of Soudan? Of the western coast? Cape Colony? The eastern coast? Madagascar? The Somali region? Where do you specially find the acacia and the oil-palm? The aloe? (*The Socotrine aloes are the best in the world.*) What are the most useful animals of Africa? Ans. *The camel, the elephant, and the ostrich.* What does the elephant supply to us? Ans. *His tusks are the ivory, which is one of the great articles of export.* Where is the Ivory Coast? Name some animals peculiar to Africa. Ans. *The gorilla and chimpanzee.* Where is salt found? Diamonds? Where is the Gold Coast? On what coast do you find a coral fishery?

Countries.—What states border on the Mediterranean? What is the capital of each? What oasis belongs to Tripoli? Ans. *Fezzan.* Where is Fez? Mourzouk? What sea borders Egypt on the east? Where are the Pyramids? Alexandria? Sioot? Khartoom? Abyssinia? Name capital. What great region south of the Sahara? What countries on the coast between Senegal and the Niger? What country occupies the southern extremity of Africa? What is the capital? Where is Natal? Transvaal? What two countries on the coast lie north of the Zambezi? Capitals? On what island is the capital of Zanzibar? Where is Madagascar? What is its capital?


AFRICA
POLITICAL & PHYSICAL
GREAT DESERT OR SAHARA
GULF OF GUINEA
MEDITERRANEAN SEA
EGYPT
Alexandria
Cairo
Suez
Khartoum
Timbuctoo
Zanzibar
Mombasa
Elephant
Eland
Buffalo
Zebra
Lion
Leopard
Panther
Antelope
Camel
Parrots
Monkeys
Cattle
Ostrich
Giraffe
Rhinoceros
Hippopotamus
Crocodile
Python
Vulture
Jackal
Hyena
Gazelle
Ape
Baboon
Gorilla
Chimpanzee
Orang-outang
Elephant
Tiger
Panther
Jaguar
Wolf
Fox
Bear
Deer
Goat
Sheep
Ox
Horse
Ass
Mule
Camel
Dromedary
Llama
Alpaca
Vicuna
Guanaco
Reindeer
Dog
Cat
Rabbit
Squirrel
Rat
Mouse
Hare
Beaver
Otter
Seal
Walrus
Whale
Dolphin
Porpoise
Shark
Swordfish
Sawfish
Turtle
Tortoise
Crocodile
Alligator
Lizard
Snake
Frog
Toad
Newt
Salamander
Eel
Trout
Salmon
Herring
Cod
Haddock
Mackerel
Sardine
Anchovy
Flounder
Sole
Turbot
Halibut
Plaice
Dab
Skate
Ray
Shark
Swordfish
Sawfish
Dogfish
Porpoise
Dolphin
Whale
Walrus
Seal
Otter
Beaver
Rat
Mouse
Squirrel
Rabbit
Hare
Cat
Dog
Reindeer
Llama
Alpaca
Vicuna
Guanaco
Camel
Dromedary
Ass
Mule
Horse
Ox
Sheep
Goat
Deer
Bear
Fox
Wolf
Jaguar
Panther
Tiger
Elephant
Orang-outang
Chimpanzee
Baboon
Ape
Gorilla
Gazelle
Jackal
Hyena
Vulture
Python
Crocodile
Rhinoceros
Hippopotamus
Giraffe
Ostrich
Cattle
Monkeys
Parrots
Zebra
Lion
Leopard
Panther
Antelope
Camel
Eland
Buffalo
Elephant
Zanzibar
Mombasa
Khartoum
Timbuctoo
Alexandria
Cairo
Suez
EGYPT
GULF OF GUINEA
GREAT DESERT OR SAHARA
MEDITERRANEAN SEA
BLACK SEA
BAY OF BISCAY
CAPE
NILE
NIGER
CONGO
ZAMBESI
MOZAMBIQUE CHANNEL
MADAGASCAR
ATLANTIC OCEAN
INDIAN OCEAN
ANTARCTIC OCEAN
EQUATOR
TROPIC OF CANCER
TROPIC OF CAPRICORN
SCALE OF MILES

LXXII. GENERAL DESCRIPTION.

1. Africa is chiefly in the Torrid Zone, and contains a large part of all the land that lies in that zone.

Africa is united to Asia by the narrow isthmus of Suez, and is nearly surrounded by water. Its long coast line, unlike that of Europe, has few indentations.

2. **Surface.**—Africa is a vast plateau from 1,500 to 4,000 feet high, and surrounded by a belt of low, marshy, malarious land, varying in width from a few miles to two hundred.

The highest and most extensive mountain range is that of the Mountains of the Moon, situated on the east side of the continent, and facing the Indian Ocean.

In this range are the snowy peaks of Kenia and Kilima-Njaro near the equator, which have an elevation of about 20,000 feet.

The other important ranges are the Atlas, on the north, the Kong, on the western coast, and the Snow Mountains of Cape Colony, on the south.

3. **Deserts.**—The great Desert of Sahara, the Libyan and Nubian Deserts in the north, and the Kalahari Desert in the south, though barren themselves, contribute largely to the productiveness of the more favored portions of the continent.

The Atlantic slopes and the region of the Cape have their fertility in these deserts. The hot sun so rarefies the air that vapor-laden winds are drawn in from the sea. The coast mountains condense the moisture in vapors and cause a considerable rainfall.

4. **Rivers and Lakes.**—Africa is the driest of the continents. There are, however, here and there great rivers, such as the Nile, the Niger, the Congo or Livingstone, and the Zambezi.

The *Nile* is the most important of these rivers, and is one of the longest in the world.

The Lakes Victoria Nyanza, Albert Nyanza, and Tanganyika are among the largest in the world. The first two are drained by the Nile.

5. **Climate.**—Africa is the hottest of all the continents. It has a diversified climate.

The northern portion lies in the region of the north-east trade-winds; and these, coming from the dry plateau of Arabia, are rainless and hot.

Central and Southern Africa are largely in the region of the south-east trades. These come from the Indian Ocean and are laden with moisture, which is condensed by the lofty mountains of equatorial Africa, and feeds the great lakes and rivers of the continent.

6. **Vegetation.**—The equatorial regions of Africa form a belt of fertile country, marked by luxuriant tropical vegetation, similar to that of South America.

On each side of this broad belt are grass lands and prairies; those of Soudan on the north, and on the south the country of the Zambezi.

Beyond these again, both north and south, are the dry and sandy regions of the Sahara and Kalahari, while the extreme northern and southern portions of the continent are regions of extraordinary productiveness.

On the Atlas range and the northern borders of the Sahara is the "land of the date," and on the highlands of Abyssinia are extensive forests of the coffee-tree. The gigantic baobab, the acacia, oil-palm, sugar-cane, cotton, tobacco, and cotton, are found from the Sahara to the Zambezi.

The date palm supplies a large portion of the inhabitants with food. The oil-palm yields palm-oil, and the acacia produces gum-arabic.

7. **Animals.**—Strange and ferocious animals are found in great number and variety in Africa.

It is the home of the elephant and rhinoceros, the lion and the leopard, the crocodile and hippopotamus, and those strange animals, the gorilla and chimpanzee, that bear such a strong resemblance to the human form.

THE GORILLA.

The ostrich buries her eggs in the sands of the deserts; the zebra and giraffe, the antelope, and the swift-footed gnu, roam over the plains.

A great plague of Central and Southern Africa is the *tsetse* fly, which resembles our common house-fly. Its bite is fatal to horses, and sometimes to cattle, though harmless to man. In all the region between Soudan and Cape Colony, loads of goods and other merchandise are transported on the backs of negro carriers. Beasts of burden cannot be used, owing to the prevalence of this fly.

8. **Inhabitants.**—The northern portion of the continent is inhabited by Berbers, Arabs or Moors, and Egyptians.

Soudan and the region to the south of it as far as the Congo River is the "land of the blacks." Some of them till the soil and raise cattle, others have skill in tempering steel and working gold, but they are generally exceedingly ignorant and degraded. They believe in witchcraft, and worship idols and the spirits of the dead.

South of the Congo River are found the Kafirs and Hottentots, and in the Kalahari Desert the Bushmen, who live in caves like wild animals.

9. **Political Geography.**—Egypt and some of the Barbary States own a certain degree of allegiance to Turkey.

Algeria and St. Louis belong to France. Cape Colony, Natal, Transvaal, the Diamond District, and Sierra Leone are English

possessions. Large portions of both the eastern and western coasts belong to the Portuguese.

Morocco, Abyssinia, Zanguebar, and other parts of the continent not occupied by Europeans, are under despotic rule.

Questions. 1. In what zone does Africa chiefly lie? How is it joined to Asia? What is said of its coast-line? 2. What is said of the surface? Highest mountain range? Other important ranges? 3. Name the deserts. What portions of the country do they render fertile? How? 4. How does Africa compare with the other continents in regard to mountains? What is said of the Nile? 5. What is said of climate? Northern portion? Central and Southern Africa? 6. What can be said of vegetation in the equatorial regions? What of the Soudan and Zambesi countries? What of the region north and south? What do you find on the northern borders of the Sahara? In Abyssinia? Name some of the principal products. What is said of the date-palm? The oil-palm? The acacia? 7. Name some of the animals of Africa. What is said of the gorilla? What peculiar bird belongs to the desert? What animals roam over the plains? What is said of the tsetse fly? 8. What inhabit the northern portion? What is Soudan and the region south commonly called? What is said of them? 9. What states owe allegiance to Turkey? Name the French and English possessions. Where does despotic rule prevail?

LXXIII. REGION OF THE NILE.

1. **Egypt.**—Egypt occupies the lower portion of the Valley of the Nile. Nubia, Kordofan, a part of Soudan, and the rest of the Nile Basin as far south as the Equator, also belong to Egypt.

2. **The Nile.**—The Valley of the Nile is in a rainless region. Except in the Delta, rain scarcely ever falls, and a cloud is rarely seen.

For more than 1,200 miles in its lower course, the Nile does not receive a single tributary.

PICTURESQUE VIEW OF THE NILE IN EGYPT.

At certain seasons, however, among the mountains of Abyssinia and the equatorial regions, from 2,000 to 3,000 miles distant, the rains pour down in torrents. The Nile is swollen by this rainfall and overflows its banks. Late in June the descending flood reaches Lower Egypt, and the river gradually rises until the country becomes a vast inland sea. By the end of November the waters subside, leaving a rich sediment which covers the land and renders Egypt one of the most fertile regions on the globe.

In olden times it was the granary of the world, the home of learning and the seat of political power. More than 3,000 years ago the Egyptians were a highly civilized people. The ruins of their temples and pyramids are unrivalled for grandeur, while the paintings on the walls of their tombs, as bright to-day as when executed by the artist, show that they had made wonderful progress in the arts of life.

3. **Productions.**—The leading productions are wheat and cotton. Hemp, flax, sugar, tobacco, dates, and coffee thrive well.

4. **Commerce.**—Egypt has a large caravan trade with the interior of Africa, in gold-dust, ivory, and ostrich feathers, and a very important maritime commerce with various countries of Europe. The exports are grain, cotton, indigo, and dates.

The Suez Canal, 100 miles long, connects the Red Sea and the Mediterranean. It forms a short and important route for commerce between Europe and Asia. It accommodates vessels drawing 25 feet of water.

5. **The population** of Egypt is about 5,000,000. It consists mainly of Arabs and Copts. The prevailing religion is Mohammedanism.

The Copts, the descendants of the ancient Egyptians, are Christians.

6. **Government.**—The government is an absolute monarchy. The ruler is called the *Khedive*, which means king.

He pays an annual tribute of about $3,500,000 to the Sultan of Turkey. Egypt is the most enterprising country of Africa. Western civilization is largely adopted. The discipline of the army is European. The steamboat, the railway, the post-office, and telegraph have been introduced.

7. **Cities.**—Cairo, the capital, is the largest city of Africa and a great centre of trade. Alexandria is the principal seaport and commercial city of Egypt. Soüt is an important *entrepôt* for the caravan trade with Soudan.

8. **Nubia** consists for the most part of grassy steppes. It is occupied by negroes and Arabs.

Khartoum, the capital, has an extensive trade in gums and ivory.

9. **Kordofan** contains fertile spots having a tropical vegetation. Its inhabitants are negroes.

El Obeid is the capital. It is built of circular houses of mud and brick.

10. **Abyssinia** consists of three regions of different elevation.

The two lower are marked by tropical and semi-tropical vegetation. The uppermost is a grazing district.

The country is rich in gold, iron, and salt. Small blocks of salt are used as money. Gondar, Antalo, and Ankobar are the chief towns.

Questions. 1. What does Egypt occupy? What countries belong to Egypt? 2. What is said of the Nile? Describe the overflow. When do the waters subside? Effect upon the land? What can you say of the old Egyptians? 3. Leading productions? 4. What is said of the commerce of Egypt? Exports? Suez Canal? 5. Population? Prevailing religion? Copts? 6. What is the government? Title of ruler? What have been introduced? 7. What is said of Cairo? Alexandria? Soüt? 8. Nubia? 9. Kordofan? 10. Abyssinia? Minerals? Chief towns?

LXXIV. THE BARBARY STATES.

1. Morocco, Algeria, Tunis, Tripoli, and Barca are known as THE BARBARY STATES, and are so called from their early inhabitants the Berbers.

These states extend along the Mediterranean for 2,000 miles.

They are bordered on the south by the Desert of Sahara, and are often visited by its hot winds. Their climate, however, is generally mild and delightful; the coast region enjoys almost perpetual spring.

The products of this region are wheat, dates, the olive, the grape, and other fruits.

Between the Atlas Mountains and the great desert is a region known as the *Land of Dates*. Here groves of the date-palm supply the natives with food and protect them from the sun.

The inhabitants are Mohammedans and French colonists.

The Barbary States have a large caravan trade across the Sahara with Soudan, from whence they receive ivory and gold-dust, gums and ostrich feathers.

Their trade with Europe is important. The chief exports are grain, dates, olive oil, and Esparto grass, used for the making of paper.

This region in ancient times supplied the armies and navies of Carthage, the rival of Rome.

2. **Morocco.**—Morocco is the largest and most important of the Barbary States. It is an independent empire, ruled by a sultan.

The exports are beans, maize, and wheat, goat-skins, almonds, and wool.

Morocco, the capital, is famous for its leather. Fez, the chief commercial city, is largely engaged in the caravan trade with Central Africa.

3. **Algeria.**—Algeria is a colony of France.

It is rich in minerals, especially iron. From its gardens Southern France and other parts of Europe are supplied with early fruits and vegetables.

Algiers, the capital, is the centre of trade, and a favorite resort for invalids in winter. Constantine and Oran are important towns.

4. **Tunis.**—Tunis embraces in part the territory of ancient Carthage.

A fleet of 100 vessels comes every year from Italy to fish for coral off the coast. The capital, Tunis, is the largest, and, commercially, one of the most important cities of the Barbary States.

5. **Tripoli.**—Tripoli, having no mountains between it and the Sahara, is sterile, the sand of the desert being blown up to the very margin of the sea.

Tripoli, the capital, has a large caravan trade with the Sahara.

FEZZAN, the great oasis, belongs to Tripoli.

The inhabitants of Mourzouk, the capital, live chiefly by traffic in slaves. They buy them from the princes of Soudan, in Borgu, near Lake Tchad, and march them 800 miles through the desert to Mourzouk. From this point they are taken to the Mediterranean cities, but chiefly to Cairo. The total number brought annually is about 10,000. The bleached bones of those who perish on the desert march mark the route between Mourzouk and Bornu.

TRIPOLI and BARCA are subject to Turkey. Bengazi is the capital of Barca.

Questions.—1. Name the Barbary States. Why so called? How long is their coast-line? What borders them on the south? Climate? Products? Land of dates? Inhabitants? Caravan trade? Exports? 2. How does Morocco rank among the Barbary States? Form of government? Exports? Capital? What of Fez? 3. What is Algeria? Minerals and vegetable products? What is said of the capital? Other towns? 4. What does Tunis embrace? Its coral fisheries? Capital? 5. Why is Tripoli sterile? What is said of the capital? What is Fezzan? What can you say of Mourzouk? To what power do Tripoli and Barca owe allegiance?

LXXV. SAHARA AND SOUDAN.

1. **Sahara.**—The Sahara is the largest desert in the world. It reaches from the Atlantic Ocean on the west to the Nile on the east.

It is a part of the great desert belt that extends from the western shores of Africa to the eastern limits of the desert of Gobi, in Asia, thus crossing two continents.

2. **The Surface** consists of vast plateaus of gravel and sand, broken by hills of drifting sand, and bare rocky ridges, with here and there a fertile spot or oasis.

These oases are like islands of verdure amid an ocean of sand. They determine the caravan routes.

The atmosphere is singularly dry, and the sun beats down with terrific force. The sand is like fire, the air like flame. Notwithstanding this heat by day, it often freezes at night. In the winter the people in some sections wear furs.

3. **Population.**—The scanty population consists chiefly of nomadic tribes of Arabs or Moors, that wander with their flocks from one oasis to another in search of pasturage.

In some of the larger oases, villages and cities are found having a considerable population.

In the central regions of the Sahara are the Tuaregs, a tall and handsome people, who wear a shawl round head and face to protect them from the blown sands of the desert. They control the caravan routes, and act as guards to the caravans in their passage.

4. **Trade.**—The people of the desert are largely occupied in transporting, by means of their camels, the exports of the Soudan to the Mediterranean cities, and bringing in return cutlery, cotton goods, and trinkets.

The salt of the Sahara mines and brine pits constitutes the wealth and only important export of this region. In some places it is quarried in blocks. At Bilmah, which supplies the greater part of Central Africa with salt, are pits on which, every two or three days, a crust of salt is formed several inches thick. Caravans of 1,000 camels go to Bilmah for it.

5. Caravans.—Numerous caravans cross the desert from the Barbary States and Egypt. The main routes are from Tripoli to Kano, in Soudan, from Morocco to Timbuctoo, and from Egypt to Kobbe.

CARAVAN CROSSING THE DESERT.

Thousands of camels, freighted with merchandise, pass over these waves of the wilderness. They occupy from thirty to ninety days in their journey. The camel has justly been called the "ship of the desert." He is wonderfully fitted to live in this waterless region, and act as carrier across the pathless sands. He is provided with a pouch that will hold a supply of water sufficient for several days, while his feet are furnished with a cushioned sole, which protects them from the burning heat of the sand, and makes his footing firm.

6. Soudan.—Soudan is a broad, fertile belt, immediately south of the Sahara, and stretching nearly across the continent.

Its prairies yield abundant pasturage and large crops of Indian corn, while cotton and indigo grow wild.

7. The population consists of Arabs and negroes. The latter, especially the inhabitants of the kingdom of Bornu, near Lake Tchad, are the most intelligent and civilized of their race.

They till the soil, manufacture implements of iron, and understand the arts of weaving and dyeing. Many of them are Mohammedans.

8. Trade.—Soudan has a large caravan trade with Egypt and the Barbary States. The chief articles of export are gold-dust, ivory, palm-oil, and ostrich feathers.

Some of the cities are very large. Yakoba is said to have a population of 150,000. Kano, Sokoto, and Timbuctoo are starting-points for caravans bound for the shores of the Mediterranean.

Questions.—1. What is the largest desert in the world? What are its eastern and western limits? 2. What is said of the surface? Oases? Of the heat by day? The cold by night? 3. Population? Who are the Tuaregs? 4. How are the people largely occupied? What is said of their salt trade? 5. Between what points are the great caravan routes? How long does it take to cross the desert? What is said of the camel? 6. Where is Soudan? What are its products? 7. Population? 8. Trade? Exports? Name some of its cities.

LXXVI. THE WESTERN COAST.

1. The narrow belt of low alluvial land bordering the western coast of Africa has a hot, unhealthy climate, and is marked in general by a tropical vegetation.

2. **Senegambia** is watered by the Senegal and Gambia. It abounds in gold, iron, and gum.

England, France, and Portugal have here important trading posts.

3. **Sierra Leone** is an English colony established as an asylum for negroes rescued from slave-traders. Freetown is the capital.

4. **Liberia** is a small independent republic, settled by emancipated American negroes.

The soil yields coffee, cotton, sugar, and indigo. The oil-palm grows abundantly. Monrovia is the capital.

5. **Ashantee, Dahomey,** and **Yoruba** are native kingdoms on the "Ivory and Gold Coast."

The most valuable tree of this region is the oil-palm. It produces bunches of a fruit which looks like a red or yellow plum. A bunch will contain from 800 to 1,000 "plums." The oil is obtained by boiling the fruit.

The inhabitants are warlike and exceedingly cruel. When a king dies, great numbers of his subjects are sacrificed at the tomb.

Coomassie, Abomey, and Abbeokuta are the chief towns. The last contains a native population of about 150,000, and has a large caravan trade. Lagos, belonging to Great Britain, is an important seaport. Steamers carrying palm-oil ply regularly between this port and Liverpool.

The exports are gold-dust, ivory, and palm-oil.

6. **The Portuguese Possessions.**—Loango, Congo, Angola, and Benguela are inhabited by native tribes.

These countries are subject to the Portuguese, who have trading posts on the coast. St. Paul de Losanda is the capital and chief commercial town.

The exports are ivory, gold, and wax.

7. **Islands off the Coast.**—The Cape Verd Islands, Madeira, and the outlying Azores, all belong to Portugal.

They are famous for fruits and wines. Large quantities of oranges are exported from St. Michael's, one of the Azores. As many as 250,000 oranges have been gathered from a single tree there in one year.

THE CANARIES, also volcanic, belong to Spain. They are famous for their wines. To them we owe the sweet little singing-bird that bears their name. ST. HELENA, a rocky island owned and fortified by Great Britain, is of note because there Napoleon Bonaparte was imprisoned and died.

Questions.—1. What is said of the climate and vegetation of the western coast of Africa? 2. How is Senegambia watered? What are its products? What powers have trading posts here? 3. What is Sierra Leone? 4. Liberia? Products? 5. What kingdoms on the Ivory and Gold Coasts? The oil-palm? Inhabitants? Towns? What is said of Lagos? Exports? 6. Name the Portuguese possessions. Exports? 7. What islands off the coast belong to Portugal? Products? What of the Canaries? St. Helena?

LXXVII. SOUTHERN COLONIES.

1. Cape Colony, Transvaal, Griqua-Land, and Natal belong to England.

2. **Cape Colony** is adapted to stock-raising, which is the chief industry.

A singular occupation is ostrich-farming. Ostriches are kept in large herds, like cattle, for the sake of their feathers.

The grapes of the Cape are said to be the finest in the world.

The exports are wine, wool, and diamonds. Cape Town is the capital.

3. **Natal** exports wool, coffee, and hides. It is rich in coal.

4. **The Orange Republic** is a small Dutch settlement.

5. **Transvaal** has fine pasturage, and produces wheat, cotton, coffee, and sugar-cane. It abounds in gold.

6. **Griqua-Land** includes the famous diamond district of South Africa.

Questions. 1. Name the English colonies in South Africa. 2. To what is Cape Colony adapted? What of ostrich-farming? Of the grapes? Exports? 3. Exports of Natal? 4. What is the Orange Republic? 5. Products of Transvaal? 6. What does Griqua-Land contain.

LXXVIII. THE EASTERN COAST.

1. The eastern coast of Africa resembles the western in surface, climate, and productions. It comprises the Portuguese Possessions, extending from Delagoa Bay to Cape Delgado, with Zanguebar and the Somali region.

2. **The Portuguese Possessions** include Sofala and Mozambique. This region is inhabited by degraded negroes.

The exports are rice, gold-dust, ivory, gum, sugar, ebony, tortoise-shell, and timber. Mozambique, the capital, is the centre of trade.

3. **Zanguebar** is peopled by Arabs. The exports are rice, sugar and molasses, gum copal, ivory, fish, and cloves.

ZANZIBAR, on the island of the same name, is the capital and residence of the Sultan. It is the most important town on the eastern coast of Africa, and the chief market in the world for the supply of ivory.

4. **Somali** is peopled mostly by nomadic Arabs. It is noted for the production of frankincense and myrrh. It exports these, together with coffee, ivory, wax, gold-dust, and cattle.

Its chief town is the seaport of Berbera, where a great fair is held every year. The place is crowded with thousands of traders from various parts of Asia and Africa, who here exchange the products of the two continents.

5. **Madagascar** is the largest island off the shores of Africa. It is an independent kingdom, and is advancing in civilization.

TRAVELLER'S TREE.

In climate and products it is like South Africa. It is rich in soil, vegetation, and minerals. One of its most interesting products is the "Traveller's Tree," the leaf-stalks of which contain as much as a quart of pure water, even in the driest weather.

The ISLAND OF MAURITIUS belongs to Great Britain. RÉUNION, or BOURBON, is a French settlement. They are both extremely fertile, and produce large quantities of coffee, sugar, and spices.

Questions. 1. How does the eastern coast resemble the western? What does it comprise? 2. What are the Portuguese possessions? Who live here? Exports? 3. Who occupy Zanguebar? Exports? What is said of Zanzibar? 4. Who are the people of Somali? Products? Exports? What is said of the fair at Berbera? 5. What can you say of Madagascar? What part of Africa does it resemble? Name one of its most interesting products. To what powers do the Mauritius and Reunion Islands belong? What are their products?

AUSTRALIA AND OCEANIA.

MAP STUDIES.

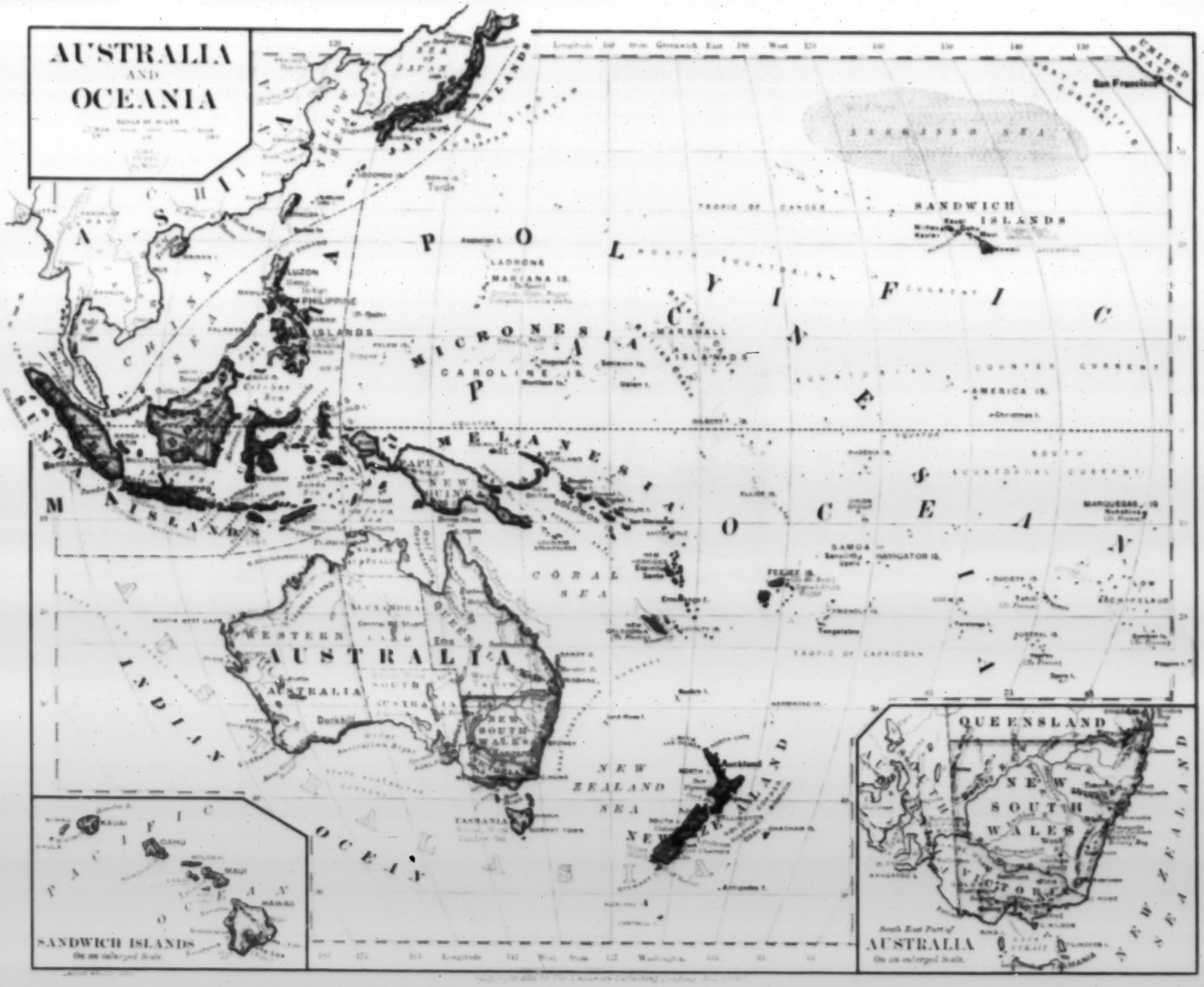
Australia	2,947,000	1,789,000
Tasmania	26,200	107,000
New Zealand	104,000	414,000
Borneo	280,000	1,715,342
Java	51,924	17,758,540
Sumatra	164,135	2,000,000
Sandwich Islands	7,629	62,959

Australia.—In what zone does Northern Australia lie? Southern? What should you think the climate must be? In what month is the Australian midsummer? Midwinter? (See paragraph on "Winter Solstice" on page 8. What gulf indents the northern coast? What bight on the south? What are the grazing and agricultural products of Australia? Of Tasmania? Of New Zealand? What is the capital of New South Wales? Of Victoria? Ques island? South Australia? Tasmania? New Zealand?

Malaysia.—What is the most important division of Oceania? Ans. *Malaysia.* What circle crosses it? What climate has it? Name the principal islands. Between what oceans do they lie? Ans. *The Indian and Pacific.* Which is the largest island? Name the vegetable products of the Sunda Islands. What is largely imported by us? Ans. *Java coffee.* What are the mineral products of Borneo? What peculiar product do we get from Borneo? Ans. *Gutta-percha.* What is gutta-percha? Ans. *The dried milky juice of the taban tree, which is found in Malaysia and the Malay Peninsula.* What large island and group east of Borneo? What do the Philippine islands produce? What little island between Sumatra and Borneo supplies a large portion of the tin of the world? Where is Manila? What is Manila hemp? Ans. *The fibre of a tree which is like the banana.* Where is Sarawak? Sumarang? Bencoolen? Singapore?

Melanesia.—Where is Melanesia? Which is the largest island? What peculiar bird is a native of New Guinea? Why is the island called New Guinea? Ans. *From Guinea, on the coast of Africa. The natives are of the negro race.*

Polynesia.—In what ocean is Polynesia? What is the climate? What is its north-west division called? Ans. *Micronesia.* What are the products of the Ladrones? To what European power do they belong? What important group in the north-eastern part of Polynesia? Its largest island? (See small map.) Name the products. What volcanoes on Hawaii? Where is Honolulu? What port of the United States is nearest to the Sandwich Islands? What are the products of the Feejee Islands?


AUSTRALIA
AND
OCEANIA
ASIA
PACIFIC OCEAN
INDIAN OCEAN
AUSTRALIA
NEW ZEALAND
SANDWICH ISLANDS
MICRONESIA
POLYNESIA
MELANESIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
SANDWICH ISLANDS
AUSTRALIA

AUSTRALIA.

LXXIX. DESCRIPTION.

1. The continent of Australia has an area nearly equal to that of the United States. It consists for the most part of a vast plain, encircled by hills and mountains of moderate elevation.

The principal mountain range is that of the Australian Alps, which contain peaks as high as 7,000 feet.

These may be compared with our own Alleghanies.

2. **Rivers and Lakes.**—The largest river is the Murray, which is more than 1,000 miles long. The lakes are unimportant.

3. **The climate** is generally dry and healthy. The northern parts of the continent, being within the torrid zone, are hot; the southern and south-eastern have a moderate temperature.

Australia lies in the southern hemisphere, and has opposite seasons to ours. There at Christmas it is midsummer.

4. **Resources.** Australia is one of the great gold and copper regions of the world. It surpasses all other countries in the production of wool.

All the principal food plants of the northern hemisphere have been introduced, and succeed well. The sugar-cane is largely cultivated.

5. **Vegetation.**—The native vegetation of Australia contrasts strikingly with that of our own country.

The leaves of the trees are olive-green, and do not change in color with the seasons. They are very narrow, and arrange themselves vertically instead of horizontally. Some of the trees shed their bark instead of their leaves. Ferns grow to the size of trees. The Australian nettle is sometimes three feet thick and forty feet high.

6. **Animals.**—The animals native to Australia are few in number. There are among them no oxen, horses, or sheep, no monkeys, and no large beasts of prey.

The largest animal is the kangaroo. It often weighs as much as a sheep. Among the birds, the most interesting are the bower-bird, so called from its building bowers for playing places; the lyre-bird, named from the shape of its tail; the black swan; and the emu or Australian ostrich. This last is sometimes seven feet high.

7. **Natives.**—The natives are degraded savages.

They are a sort of negro, with thick lips and flat noses, and a complexion varying from chocolate to black. They live in huts made of bark or the branches of trees. Their numbers are rapidly diminishing.

8. **Colonies.**—Five English colonies have been established in Australia. They are, in the order of population, Victoria, New South Wales, South Australia, Queensland, Western Australia.

9. **Government.**—Each of these colonies is ruled by a governor appointed by the government of England, and a legislative council and assembly elected by the people. They are independent one of another.

10. The **occupations** of the people are chiefly mining, stock-raising, and commerce.

The commerce of Australia is principally with England, but its trade with the United States is steadily increasing.

11. **Cities.**—The principal cities are connected by telegraph and railways. Melbourne, the capital of Victoria, is the chief commercial centre of Australia. Sydney, the capital of New South Wales, Adelaide, the capital of South Australia, and Brisbane, the chief city of Queensland, are important cities.

VIEW OF SYDNEY.

12. **Tasmania.**—Tasmania is very mountainous, and is rich in minerals. The climate is remarkably mild and the soil fertile.

The country is well watered. Large areas are covered by dense forests.

The island has been colonized by English settlers. They are chiefly engaged in lumbering, agriculture, and sheep-raising.

Wool is the leading export. The capital is Hobart Town.

13. **New Zealand.**—The islands of New Zealand have a mild climate and a fertile soil. Their vast forests yield valuable ship timber.

Among the products New Zealand flax is conspicuous.

It grows to the height of 16 to 20 feet, and has leaves 10 or 12 feet long. The fibre serves to make sails, nets, garments, baskets, and ropes.

The kauri gum, used to size calico and varnish furniture, is found beneath the soil, where, years before, kauri trees have perished.

New Zealand has abundant supplies of gold. Coal, silver, iron, and copper are found in various parts.

The chief occupations are mining, stock-raising, and wheat-growing. The leading exports are gold, wool, flax, and gum.

Wellington is the capital.

The aborigines are of the Malay race. They are entirely unlike the natives of Australia, and are finely formed, intelligent, and warlike.

The government is similar to that of the Australian colonies.

The British Possessions of Australia, Tasmania, and New Zealand, taken together, are sometimes called AUSTRALASIA.

Questions.—1. What is the area of Australia? What can you say of its surface? Principal mountain range? 2. Longest river? 3. Climate? Why has Australia opposite seasons to ours? 4. What are the great mineral products? In what product does it stand first among the countries of the world? What plants have been intro-

duced? 5. What is said of the native vegetation? Describe the foliage of the trees. 6. What is said of the native animals? Which is the largest? Name some native birds. The largest? 7. What of the natives? 8. Colonies? 9. How are they governed? 10. Occupations? Commerce? 11. Cities? Melbourne? Sydney? Adelaide? Brisbane? 12. Describe Tasmania.—Climate? Forests? Settlers? Occupations? Exports? Capital? 13. Size of New Zealand? Climate? Forests? Vegetable products? Kauri gum? Animals? Minerals? Occupations? Exports? Aborigines? Settlers? Government? What is meant by Australasia?

LXXX. OCEANIA.

1. **OCEANIA** consists of almost all the islands in the Pacific Ocean except those of Australasia. These islands lie for the most part south of the equator.

Many of them are volcanic: hundreds are of coral formation.

2. **The Coral Polyp.**—The coral polyp is a small creature, not half the size of a mite in a cheese, which builds up from the bottom of the sea vast islands, upon which sea-shells gather, seeds drift, plants grow, and finally man comes to occupy.

The coral islands are composed chiefly of the lime which the rivers bring down to the sea. The coral polyps separate this lime from the water, and build it up in various forms. The rivers and the currents of the sea perform the office of "hod-carriers" for these little masons of the deep.

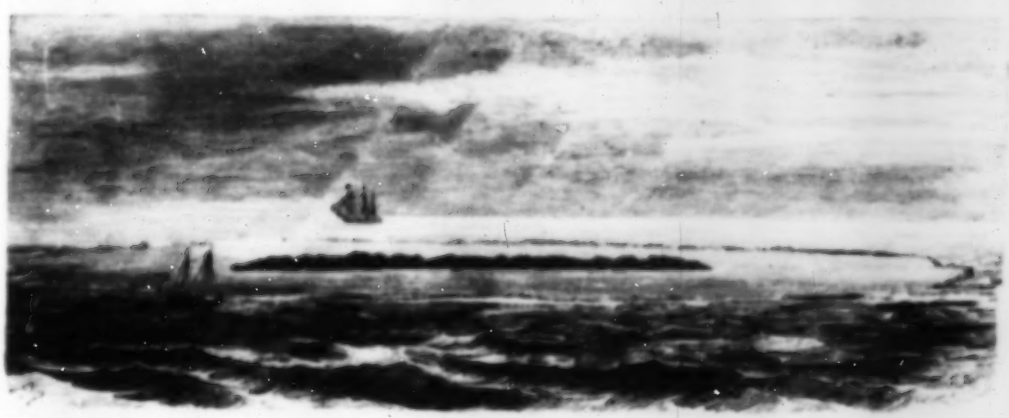
3. **Coral Reef.**—Many of the coral islands are surrounded by coral reefs at some distance from the shore.

The reefs sometimes just reach the surface of the sea, and serve as breakwaters. Between some of them and the shore ships ride in deep and smooth water.

Such a reef skirts the north-east coast of Australia for more than a thousand miles. It varies in breadth from a few yards to nearly 90 miles.

4. **MALAYSIA.**—Java, Sumatra, Borneo, Celebes, the Philippines, and the Moluccas, or Spice Islands, are called Malaysia because their native population consists of Malays.

They are also known as the "Dutch East Indies," because most of them belong to the Netherlands.



CORAL REEFS OF OCEANIA AND ITS LAGOON.

Malaysia is one of the most remarkable volcanic regions in the world. Java and Sumatra are studded with burning mountains.

5. **Java** is the "pearl of the Indies." It contains a population of more than 17,000,000.

The exports are coffee, tobacco, sugar, and various other articles.

6. **The Philippines** belong to Spain. They are more than 1,000 in number. Next to Java they are, commercially, the most important of the Dutch East Indies.

We have a valuable trade with them in rice, sugar, hemp, tobacco, nutmegs, and other spices.

7. **Sumatra,** CELEBES, and the MOLUCCAS are famed for their spices.

In Sumatra grows the largest flower in the world. Its cup is a yard in diameter, and holds two gallons of water. The plant is a parasite called *Rafflesia*. The staple export is black pepper.

8. **Borneo** is the largest island in the world.

It is noted for its gold and diamond mines. Among its curiosities is the flying frog.

The islands of Banca and Billiton are famous for their tin mines.

BREADFRUIT.

9. **MELANESIA** comprises Papua, or New Guinea, and a chain of islands extending to and including New Caledonia.

It derives its name, Melanesia, or *Black Islands*, from the negro tribes called Papuans.

They are savages. Some of them use canoes 80 feet long, and each made of a single tree.

The soil of these islands is fertile, and the vegetation luxuriant.

The bird-of-paradise is a native of New Guinea.

10. **POLYNESIA.**—Eastward of Melanesia lies Polynesia, or the *Many Islands*. These dot the Pacific through the space of many million square miles.

The north-western division of Polynesia is sometimes called MICRONESIA, or the *Little Islands*.

Here we find, in the greatest perfection, the bread-fruit, the yam, and the cocoa-nut, which are the chief food plants of the Polynesians. The sweet-scented sandal-wood, which is burned by the Chinese as incense in their pagodas, is one of the exports.

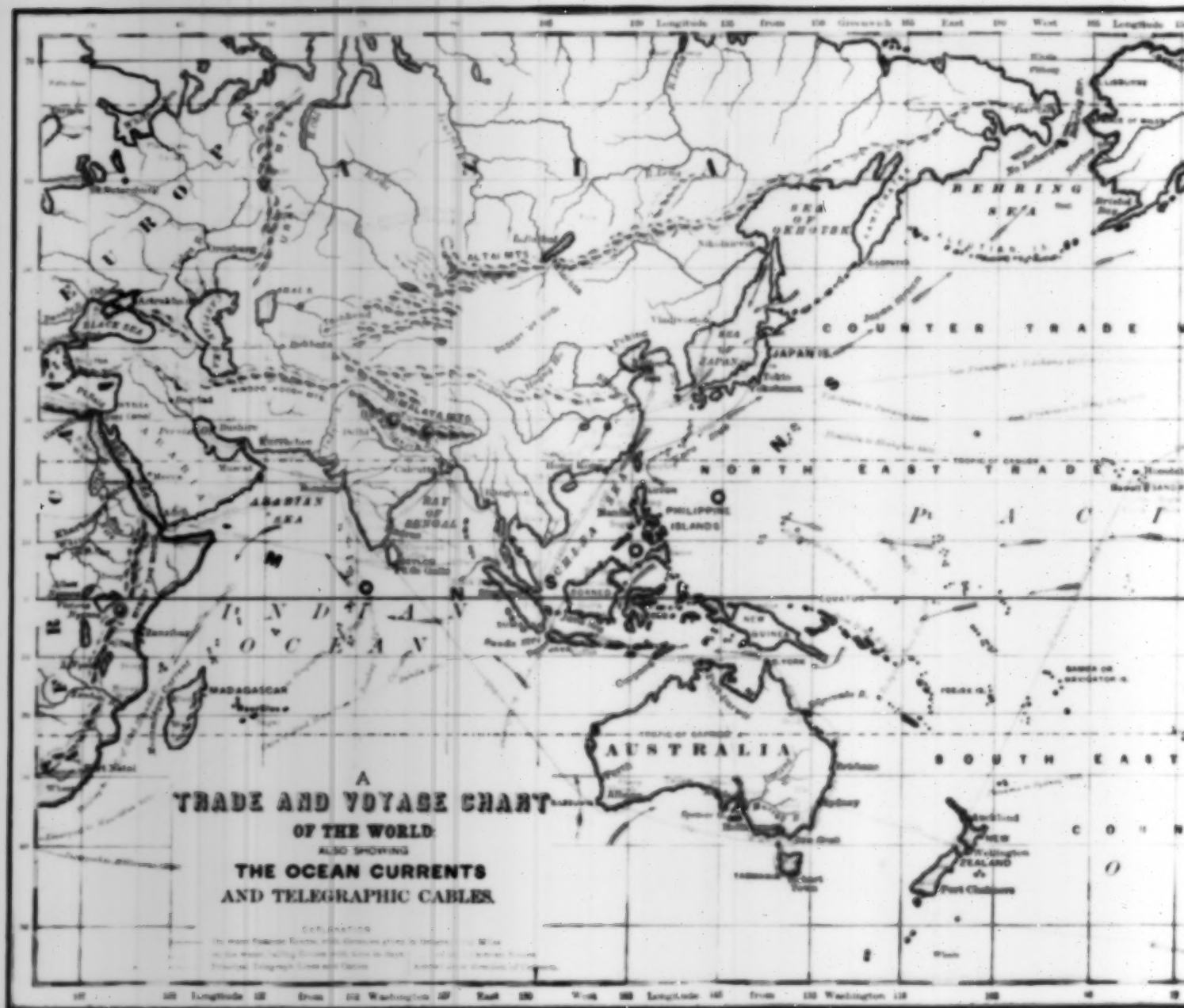
11. **The Sandwich Islands** are the only group in Polynesia that have attained to the dignity of nationality.

The government is a limited monarchy, and the people profess Christianity. They are Malays. Coffee, sugar, and cotton are the chief productions.

Honolulu, the capital, is the most important town in the whole of Polynesia. It has an extensive trade with the United States.

Hawaii, the largest island of the group, is noted for the volcanic peak Mauna Loa, with its seething caldron of molten lava, 1,500 feet deep and two miles in circumference.

Questions.—1. Of what does Oceania consist? Of what two kinds are many of the islands? 2. Describe the formation of coral islands. Of what material are they composed? 3. What are coral reefs? Name a large one and state its size. 4. What is Malaysia? To what power do most of its islands belong? For what are they remarkable? 5. What is said of Java? 6. Of the Philippines? 7. Of Sumatra? Celebes? The Moluccas? 8. Borneo? 9. What does Melanesia comprise? What is said of the natives? 10. What is meant by Polynesia? By Micronesia? What are the products? 11. What of the Sandwich Islands? Honolulu? Mauna Loa?



TRADE AND NAVIGATION.

What is commerce? What was in early ages the great trade of the world (see page 89, par. 9)? What nations gained control of the India trade after 1497? Ans. *Those that occupied the Atlantic coast of Europe; chiefly England and the Netherlands.* What caused this (see p. 89, par. 9)?

What means of transportation are employed in Central and South Africa, and why (see p. 116, par. 7)? What in the Sahara (p. 118, par. 4)? What in carrying on the great tea and fur trade between Russia and China (p. 113)? What beasts of burden are used in the Andean States (p. 80)? How is trade carried on between India and Western Asia (p. 112)?

How are goods paid for in many parts of Africa? Ans. *The products of one region are given in exchange for those of another.* What is used for money in Abyssinia (see p. 117, par. 10)? What in parts of India and of the African coasts? Ans. *Small shells called cowries.* How are goods paid for among civilized nations? Ans. *With money, chiefly gold and silver.*

In what parts of the United States are cattle largely raised? In what parts of South America? Where are the most important fisheries for cod, herring, and mackerel? Salmon? The whale?

What parts of the Pacific coasts of North and South America are famed for wheat? What portion of Russia (p. 92)? Of North Africa? What grains abound in the central portions of North America? Where is rice extensively raised? What are the great tea-growing regions? What important article of consumption comes from Brazil? Which of the Dutch East Indies is famed for its coffee? From what part of Arabia do we get the best coffee? What are the great coffee ports? Ans. *Rio, Mocha, Batavia.* What one of the West Indies is noted for sugar? What part of the United States? What islands in the Pacific? To what port of the United States do these islands send sugar? Ans. *San Francisco.* The shores of what great inland sea are famed for their fruits? What islands in the Western Hemisphere are also noted for their fruits?

What parts of the United States grow large quantities of wool? What parts of South America? What English colonies? What section of the United States produces cotton? What portions of Asia? Africa? What countries are noted for flax? Ans. *Russia, Ireland and the countries of Central Europe.* What is made of flax? Ans. *The fibre of the stalk is made into linen.* What are the great silk-growing countries of Asia? Of Europe? From what regions do we get furs? Seal-skins? Ostrich feathers?

What continent chiefly supplies us with ivory? What is the great ivory port of the world? Ans. *Zanzibar*. From what source do we get supplies of gum? *The gums which come from the coasts of Africa are chiefly fossil gums. The natives dig them from the sandy soil, sometimes at the depth of 6 or 8 feet. The best is brought from Zanzibar.* Where do we get our chief supplies of India-rubber? Of gutta-percha? Naval stores? Jute? Hemp? Drugs? Peruvian bark? Tobacco? Opium? Hides?

What is the great manufacturing region of the New World? Of the Old?

What cargo would a ship be likely to carry from Shanghai to New York? From Bombay to Liverpool? From Odessa to London? From San Francisco to London? From Rio to New York? Montevideo or Buenos Ayres to Liverpool? From the Guinea Coast to Liverpool? Havana to New York? New York to Liverpool (see p. 36.)? New Orleans to Liverpool?

What enables sailing vessels to venture out of sight of land (see p. 7, par. 12)? How have passages been shortened? Ans. *By navigators availing themselves of the winds and currents of the sea.*

What is the general direction of the winds in the northern half of the Torrid Zone? What in the southern half? What in the North Temperate Zone? In the South Temperate Zone? What striking exception to this system do you find in the Indian Ocean and China Seas (see p. 105, par. 2.)?

What is the best route from New York to Liverpool? Ans. *With the Gulf Stream, which helps vessels along at the average rate of twenty or thirty miles a day.* How would the vessel make the quickest return passage? Ans. *By keeping out of the Gulf Stream, going north of it in the fall, when there is no danger from icebergs, or south of it in spring.*

By what route does tea pass from China to Russia? From China to New York? Ans. *Mainly by steamers, through the Red Sea and Suez Canal.* What other route may it take? Ans. *Across the Pacific to San Francisco, and thence by Pacific Railroad.* Compare these routes in length. What was the old route? Ans. *Round Cape Horn, and thence across the Pacific.* What is the shortest route from Liverpool to Bombay? By what other route may vessels go? At what points do the steamers touch that ply between San Francisco and Sydney? What are the two routes between Sydney and Liverpool? Suppose a canal to be cut across the Isthmus of Panama, what would be the effect? Ans. *It would shorten the water route from New York to San Francisco about 10,000 miles, and would make an almost straight course between England and Australia, and between the Pacific shores of South America and the Atlantic ports of the United States.*

GENERAL REVIEW.

How does Europe compare in size with the other continents? What facilities for commerce has it? Principal mountain ranges? Where is the Great Plain? How do the rivers compare with those of the New World? Name the principal ones. What varieties of climate has Europe? How do Eastern and Western Europe compare in temperature? Explain the cause. What of the climate of Southern Europe? What are the minerals of Europe? Describe vegetation of Southern Europe. Central. Northern. The animals. To an American visiting Europe what are the most striking features? To what great families do the inhabitants belong?

What does Great Britain include? What can you say of her colonies? People? Climate? Mineral wealth? Agriculture? Manufactures? Commercial advantages? Describe the surface of Ireland. Climate. Productions. What is said of the size of Russia? The surface? Rivers? Climate? Resources? Pursuits? Chief export? People? Government? Describe surface of Norway and Sweden. Industries. People. What can you say of Lapland?

What is said of the inhabitants of Spain and Portugal? For what mineral is Spain noted? What are the agricultural productions? The exports? Colonial possessions? For what is Italy famed? Agricultural productions? In what does it excel every other country of Europe? What are the minerals? The principal exports?

What are the divisions of Greece? Most important product? What is the "Levant"? Capital? What can you say of the natural resources of Turkey? Why is it not prosperous? Who are the inhabitants? What is the official title of the government? Capital? What can you say of Roumania? Of Servia?

How is the climate of France modified? What are the agricultural productions? How does France rank in manufactures? Foreign commerce? What can you say of the government? Religion? People?

Of what does the German Empire consist? Productions? Occupations? What is the leading kingdom? Describe the surface of the Netherlands. Occupations. Colonies. In what two things does Belgium rank first among the countries of Europe? What is said of the coast of Denmark? The climate? Occupations? Exports?

Of what does the Austro-Hungarian monarchy consist? Describe surface of Hungary. Bohemia. Name the great productions. Manufactures. Exports.

How does Switzerland resemble the United States? Describe surface. The glaciers. Peaks. Lakes. People. Industries.

How does Asia compare with the other continents? What are its natural divisions? Describe the northern plain. The region of desert plateaus. The peninsulas. Name the principal rivers. Lakes. What is said of the climate of Asia? Moisture? The monsoons? Vegetation? Animals? Races? Religions? National rank? What can you say of the civilization of the Asiatics?

What does the Chinese Empire include? Of what does China consist? What can you say of the climate? Population? Mineral wealth? What is the chief industry? The great staple? Chief articles of food? Manufactures? Exports? Character of people? Government? Religion? What can you say of Manchooria? Mongolia? Thibet? Turkestan? Corea? What does the Japanese Empire embrace? What are its mineral resources? Climate? Productions? Character of people? Manufactures? Government? Education? Religion?

Where is India-China? How is it affected by the south-west monsoons? What are its minerals? Agricultural productions? Exports? Religion? What does British India comprise? Describe its physical features. Name chief productions. Exports. For what are the inhabitants remarkable? What change is going on in the country? How is India governed? For what is Cashmere celebrated? Ceylon?

Describe the surface of Afghanistan and Beloochistan? The inhabitants. What routes pass through this region? How is it separated from India? How is this barrier crossed? On what does agriculture in Persia depend? Describe the climate of the country. Name the chief production. Exports. What is the government? Describe the surface of Arabia. What are the exports? Holy cities?

What constitutes Asiatic Turkey? Name the exports. What makes Syria interesting to us? What does Asiatic Russia embrace? Describe the climate of Siberia. Name the exports.

How does Africa compare with the other continents? Describe vegetation. Name peculiar animals. Who are the inhabitants? What does Egypt occupy? What makes it fertile? Chief productions? Government? Where are the Barbary States? Name chief productions. Exports. Describe surface of Sahara. Population. Caravans. What two valuable plants grow wild in Soudan? Name exports. Describe the Western Coast. What English colonies in South Africa? Chief industry? What are the exports of the Eastern Coast?

Describe the climate of Australia. Resources. Vegetation. Animals. Natives. Colonies. Occupations. What is the leading export of Tasmania? Of New Zealand? What does Oceania include? How have many of the islands been formed? What are the Dutch East Indies? What are the chief exports of Java? Sumatra?

Why is Melanesia so called? What is the meaning of Polynesia? Name its most important group. For what is Hawaii noted?

MISCELLANEOUS REVIEW.

How nearly right was Columbus in supposing that if he sailed steadily westward from Europe he would reach India? What great circle is the largest measure round the earth? Why is it that when it is 12 M. in New York, it is about 5 P.M. in Liverpool? What places have the same time? How far must you travel east or west from your home to find your watch differing by one hour from the clock of the place which you visit? Why this precise distance?

In what parts of the world is it mid-summer at Christmas? Explain this. Why are the equatorial regions the hottest? Where do the longest days and nights occur? Why? In what regions is the downfall of rain greatest? What causes the equatorial cloud ring? How does it affect the land of Egypt? Which of all the continents is the best watered? Show how this is caused. What parts of South America are dry? Why? Which is the driest of the continents? What is the cause? What would be the effect if the continents were all level? Explain the means by which India and Indo-China are supplied with rain.

In what zone are the most powerful and intelligent nations found? What cereal is their great article of food? Ans. *Wheat.* What great populations live mainly on rice? Where is the banana the great food plant? The bread-fruit? What was the granary of the world in olden times? What are the great grain-growing regions in our day? What kind of people live beyond the northern limit of wheat, barley, and rye? For what are the people of Iceland famed? Compare the natives of New Zealand with those of Australia? Where do you find black men? Where are English-speaking races found? What can you say of the number of the German race in Europe?

What effect has climate upon human industries? What are the great cotton-growing regions of the world? Where does cotton grow wild? In what countries do you find the greatest attention paid to cattle-raising? Which is the grazing region of the United States? What countries are specially interested in fisheries? Where are the most important fisheries in the world? What insect contributes to the revenue of Greece? What insect is a leading export from Mexico? From what waters do we get coral? Is there any other kind besides that which is used in jewelry? Ans. *That of which the coral islands are formed.* What part of the United States is a coral formation? Where are the pearl fisheries? Where do sponges come from? What are they? How are they obtained?

What religion prevails among European nations? What religions are prominent in Asia? In Africa? In the New World? In what large island off the coast of Africa has Christianity been adopted? In what group of islands in Polynesia?

In what parts of the world do you find the best governments? What continent is largely under despotic rule? Are any parts of Europe under despots? What is the consequence of bad government in Turkey? In what countries is education most generally diffused?

In what directions do the mountain systems of North America lie? What is the advantage of this? How do the rivers of the Atlantic Slope compare in length with those of the Mississippi Valley? Why are the latter so much longer than the former? In what directions do the mountain ranges of Asia lie? What is the advantage of this? In what parts of the United States is artificial irrigation employed? In what other countries is it practised? What is the great agricultural region of the United States?

In what countries is manufacturing chiefly carried on? What are the great manufacturing interests of New England? Why is it natural that cotton-mills should be successful in Georgia? How do Maine and North Carolina contribute to aid the navigator? What river of Scotland is famed for the building of ocean steamers? Where are iron steamers built in the United States? In what parts of the United States is the iron interest most important? Where are the largest porcelain factories in the world? What countries are most occupied in the production of silk goods? What are the great silk-growing countries of the world? In what one of the United States is it produced? Where in the United States is the silk manufacture flourishing? Upon what article of fuel do manufactures depend? What are the great coal-producing countries of the world?

What are the largest rivers of the world? Name those that have most commercial importance. Why should populous cities grow up at the mouths of large rivers? What has contributed to cause the growth of Chicago? San Francisco? St. Louis? New Orleans? Atlanta? Galveston?

What parts of the world are settled by English colonists? What are the great occupations of Cape Colony? Of New Zealand? Australia? From what countries chiefly do emigrants come to the United States? What attracts them? What part of South America is receiving large numbers of emigrants? What is the leading occupation in the Argentine Republic?

What tribes live in tents? Of what do the Esquimaux make their huts? In what dwellings do the Bushmen live? The wild Indians? Of what do the Japanese make their houses? Where are houses made of mud? How did the natives of Venezuela originally build their houses? Where do many of the people dwell in boats?

MAP-DRAWING.

The Object and Value of Map-Drawing. Map-drawing, as ordinarily practised in schools, is more correctly spoken of as *map-sketching*. It does not aim to represent the features of continents and countries with accurate detail. This is the special business of the chartographer. The map-drawing of schools, on the other hand, is simply an aid to the study of geography.

The pupil, by sketching maps on paper, slate, or black-board, fixes in mind more readily the facts of physical geography, the contour of countries, and their relief and drainage. A form which has been correctly delineated without assistance, *must* be fully and permanently impressed upon the memory. Increased interest is also imparted by this means to geographical study, because learning to represent various physical features of a country by sketching them in a map, is far more attractive to a child than studying the same features for the purpose of making an oral recitation. Progress by this method may seem slow at first, but experience proves it to be the most rapid, satisfactory, and thorough, in the end.

It is further to be observed that map-drawing furnishes an additional method of convenient and profitable class recitation. A teacher having before him maps drawn by his class, can measure the proficiency of each pupil with a degree of thoroughness not attainable under a purely oral system of recitation.

Methods of Map-Drawing. Various methods of map-sketching have been devised.

Some teachers instruct their pupils to observe closely the characteristic features of the map, and draw its outlines from memory, without using any guiding lines. In this way excellent work is often produced. For sketching simple outlines this perhaps is the best method.

But in the drawing of continents, and such countries as are irregular in form, it is expedient to employ some kind of construction lines to aid in securing approximately correct outlines, and in locating important points.

The method of map-drawing here presented has been found to be specially easy of application. It consists essentially in the use of a rectangle divided into equal squares by vertical and horizontal lines. Additional oblique guiding lines are employed whenever their use facilitates the work. Pupils find the drawing of the diagrams a recreation rather than a task. The figures are easily remembered, and the delineation of the map by their aid is not beyond the most ordinary ability.

General Directions to Teachers. Teachers who have had instruction in professional schools will rarely need to be advised to include map-drawing as one of the means of doing the best work in geography classes, or require any instruction as to method of procedure. For those who may have had no training or practice in map-drawing, the following suggestions are made:

(1.) Do not be deterred from attempting this work from apprehension of its difficulty. There are no difficulties that will not readily yield to a moderate degree of study and practice. The quickened interest of your pupils, and the larger results of their study will fully compensate for all the labor involved.

(2.) Study and practise by yourself, until you become familiar with all details. You will be surprised to find how readily imagined difficulties diminish or disappear.

(3.) As you desire to secure practical results rather than artistic effect, direct your attention toward accuracy and neatness, rather than finish or ornamentation.

(4.) The only apparatus needed for first practice, in addition to slate and pencil, or black-board and crayon, is a graduated ruler. Such a ruler, for use on a slate or on paper, may be easily made from card-board or thick paper, by the aid of the graduated scale on the margin of this page. For use upon the black-board, a narrow strip of thin board, twenty or thirty inches long, can be obtained and marked off into inches and fractions of an inch; but after practice rulers may, in most cases, be dispensed with.

(5.) It is advisable before giving lessons in actual map-drawing, to give the class practice in drawing straight lines and rectangles, and dividing the latter into squares by equidistant vertical and horizontal parallel lines, till each pupil can execute them with correctness, ease, and neatness. When this is accomplished, let the teacher, or a pupil who draws neatly, draw on the board the diagram of any map which it is proposed to sketch. Indicate clearly what measurements you may select for slate or board. Then let the class copy the diagram, until they are familiar with its execution, and can readily name the points and lines. Then add oblique guiding lines, if they are required.

Next, following the directions, draw a portion of the contour line on your model map, and let the class draw and re-draw on slate, paper, or board, observing at every point the relations of contour line to guiding lines. At each exercise, let the class re-produce rapidly the diagrams and portion of contour line previously drawn. Proceed thus, step by step, with the various details of the map, according to the accompanying directions, till the entire map can be executed with rapidity and correctness.

In early practice pupils may consult the printed map freely in drawing; but later, the drawing should be entirely from memory.

With practice, pupils become independent of measurements made with ruler in forming diagrams. Finally, they will be able to omit the lines which form the squares, and need only to indicate certain points and lines for guidance in drawing their maps. In the case of the continents, the oblique guiding lines, which correspond approximately with the general outline, are the lines needful to be retained. In no case should the guiding lines be abandoned until accurate drawing has been secured.

The guiding lines should all be drawn very lightly, or, if there is any difficulty in doing this, let them be half erased after being drawn. This will leave them sufficiently distinct for working purposes. The outline may then be drawn firmly upon them.

The Diagrams. The accompanying pages furnish diagrams and directions for drawing all the continents, the United States entire, and several groups of States, selected as illustrations of the way to draw differing shapes and proportions by the aid of our rectangular diagrams. [For suggestions as to planning construction figures, see page 132.]

DIRECTIONS FOR DRAWING THE MAPS.

For Drawing North America. Construct a rectangle (see diagram), width to height as 4 to 6, thus: Draw a vertical line (6 or 9 inches for slate or paper, and 18 or 24 inches for board, are convenient measurements), and divide into six equal parts by the points 1, 2, 3, 4, 5, 6, 7.

From point 1, draw to the right a horizontal line equal in length to four of these parts, and mark its division into four equal parts by the points A, B, C, D, E. A and E being at the ends of the line.

Complete the rectangle by drawing a vertical line downward from E, and a horizontal line to the right from 7.

Divide into 24 squares by vertical lines drawn from B, C, D, and horizontal lines drawn from 2, 3, 4, 5, 6.

Designate vertical lines by the letters, and horizontal lines by the figures from which they are drawn.

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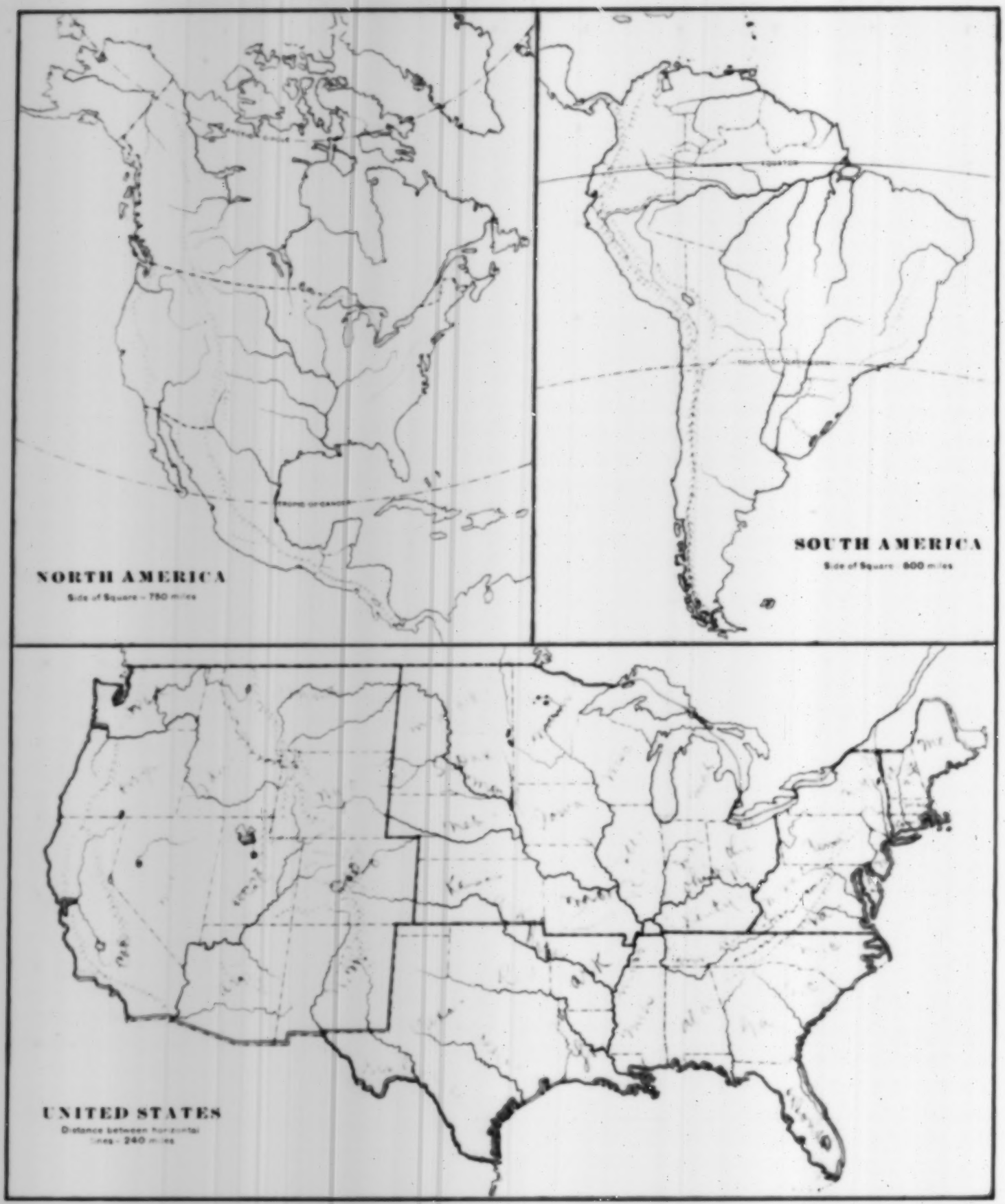

NORTH AMERICA
Side of Square - 750 miles
SOUTH AMERICA
Side of Square - 800 miles
UNITED STATES
Distance between horizontal
lines - 240 miles

Name points of intersection of any two lines by the letter and number of the intersecting lines, as the intersection of B and 2, by B 2; of E and 3, by E 3; D and 1, D 1, etc.

By dotted lines join A 1 and E 3; E 3 and C 7; C 7 and A 5. Extend lines 1 and 2 to the left, and form an additional square, also form an additional half square by the extension of lines C and D downward.

A side of one of the squares represents, for North America, about 750 miles.

NOTE TO TEACHERS.—If 6 or 9 inches be taken as the height, and 4 or 6 inches as the width of the rectangle for slate or paper, thus giving divisions of 1 or 1½ inches, the measurements are made very easy for beginners. Any measurements, however, may be used; these are suggested on account of their convenience. For blackboard, 18 or 24 inches for height, and 12 or 16 inches for width, are convenient, giving squares of 3 or 4 inches. If measurement with graduated rule is discarded after practice, division of a line into four equal parts is readily made by halving it, and then halving each half; and into six equal parts by halving it and then trisecting each half.

To draw the contour line.—Beginning a little below the point A, draw the western coast; in the outer square represent five irregular peninsulas separated from each other by deep indentations; the fourth peninsula extending westward considerably beyond the lower part of the outer line.

Next follow the line A, from 2 to 4, representing a very irregular contour lying mostly east of the line; then an outward curve from 4 to 5.

Next follow the oblique line to 7 C, representing, between 5 and 6, a long, slender peninsula extending a little below 6, and a narrow gulf extending northward nearly to 5; then an outward curve nearly to 7 C, and a somewhat regular contour line stretching diagonally across the lower half square.

Beginning again, near the point A, draw the northern and eastern coast, following the line A 1–E 3, represent, between A and B, a downward curve; from B to C, two indentations, one extending west and one south on the line 2, and then two projections, the second of which extends considerably above the line.

From C to D represent, first, a peninsula, and then a very large bay which extends west of the line C, and south of 3, and the eastern side of which is bounded by a peninsula extending a little above the line, then follow the line quite closely to E 3.

From E 3 follow the oblique guiding line to C 7; between 3 and 4 represent a large gulf extending far within the oblique guiding line, and then a peninsula lying wholly outside. From 4 to 5 represent, first, a peninsula extending toward the east, and then two bays extending nearly north, and touching the line, and then two other bays further outside the line.

From 5 to 6 describe a westward curve outside the line, and a long peninsula extending nearly to 6; next a large gulf extending westward to a point nearly half the distance from C to B, and southward more than half the distance from 6 to 7.

Between 6 and 7 represent a peninsula extending north about two-thirds of the distance from 7 to 6, and lying almost wholly east of the oblique line; then a bay; continue the coast line east nearly to line D, and south and east a little beyond the lower right corner of the half square.

As a Concert Exercise.—Map-drawing may be very pleasantly and profitably conducted as a concert exercise, after pupils have become somewhat familiar with its details.

For an example of this, we will suppose the lesson to be on the map of North America. The teacher has assigned the lesson on the previous day by placing the rectangular figure, with its divisions, and the other guiding lines upon the board in the presence of the class. To-day the entire class is sent to the boards, if they can have board-room enough; if not, slates or paper may be used.

First, see that all are ready with crayons or pencils, rulers, and clean boards or slates. Each line should be dictated separately by the teacher, *e.g.*—

(1.) A vertical line 6 inches long for slate or paper, 12 inches for board; ready—draw [describing the line first gives the slower minds an opportunity to comprehend the order. At the word *ready*, every hand should be in position to begin the line, and a little pause after this order will secure strict concert work. At '*draw*,' all lines should appear simultaneously].

(2.) Divide into six equal parts by 1, 2, 3, 4, 5, 6, 7.

(3.) From the point 1 toward the right draw a horizontal line equal in length to four of these parts, and mark its division into four equal parts by A, B, C, D, E.

(4.) Complete the rectangle by drawing a vertical line downward from E, and a horizontal line to the right from 7.

(5.) Divide into squares by drawing the horizontal lines 2, 3, 4, 5, 6; line 2, ready—draw; line 3, ready—draw, etc.; the vertical lines B, C, D; line B, ready—draw, etc.

(6.) Join A 1 and E 3; E 3 and C 7, etc.

Next teach the contour lines by drawing them yourself in the presence of the class. As a rule, these lines should be drawn from the upper toward the lower part of the figure, and the left side before the right. Describe the line carefully as you draw (see directions for drawing the map). At first the teacher should dictate while the pupils draw, but may soon require them to dictate, being always mindful that they use clear tones. When the class has been well drilled, no more than four or five minutes should be occupied in placing the entire figure and contour upon board or slate. When the drawings are finished, they should be examined and criticised in the presence of the class.

Additional Lessons in connection with map-drawing.—Besides the outline thus secured, the following topics may be learned thoroughly and recited effectively by map-drawing:

Continent	Position	Latitude.
		Longitude.
		Boundaries.
	Size	Length.
		Breadth.
		Area.
	Islands.	
	Contour	Projections.
		Indentations.
	Relief	Mountain Systems: Ranges.
		Plains. Peaks.
	Drainage	Lakes.
		Rivers.
	Political Divisions.	

For example. We have now represented the contour of the continent of North America. *In position* it lies between 8° and 72° N. latitude, and between 55° and 168° W. longitude.

It is bounded on the north by the Arctic Ocean; on the east by the Atlantic; on the south and west by the Pacific.

In size it is the third of the continents. Its greatest length, from northwest to south-east, is 4,800 miles; greatest breadth from east to west, 3,200 miles; area about 9,000,000 miles.

NOTE.—The topics under position and size are more thoroughly impressed upon the memory if recited in connection with the drawing. For preparation, the printed maps and statistical tables must be consulted. The numbers showing latitude, longitude, length, etc., may be written at the side of the drawing.

For a lesson upon the *islands* of a continent, the teacher may give the class a list of all that lie about its coast, taking them in order and numbering each. The pupil draws these islands, writing the number instead of the name. The class may be drilled to name the islands in a variety of ways: *e.g.*, one apiece round the class; two or three apiece; to point to different ones as the teacher names them, etc. Such a drill secures something better than mere recitation by rote.

The principal islands about the coast of North America are:

1. Bank's Land,	8. Newfoundland,	14. Hayti,
2. Prince Albert Land,	9. Cape Breton,	15. Porto Rico,
3. Cockburn Land,	10. Bermuda,	16. Vancouver,
4. Fox Land,	11. Bahama,	17. Queen Charlotte,
5. Southampton,	12. Cuba,	18. Sitka,
6. Greenland,	13. Jamaica,	19. Kodiak.
7. Iceland,		

A lesson on the *projections* and *indentations* may be given in the same manner as upon the islands. The projections may be designated by *a*, *b*, *c*, etc., and the indentations by 1, 2, 3, etc., in order to prevent confusion.

The *relief* and *drainage* features should next be represented upon the map, and, last, the *political divisions*. Let the pupil give a description of each in connection with the drawing.

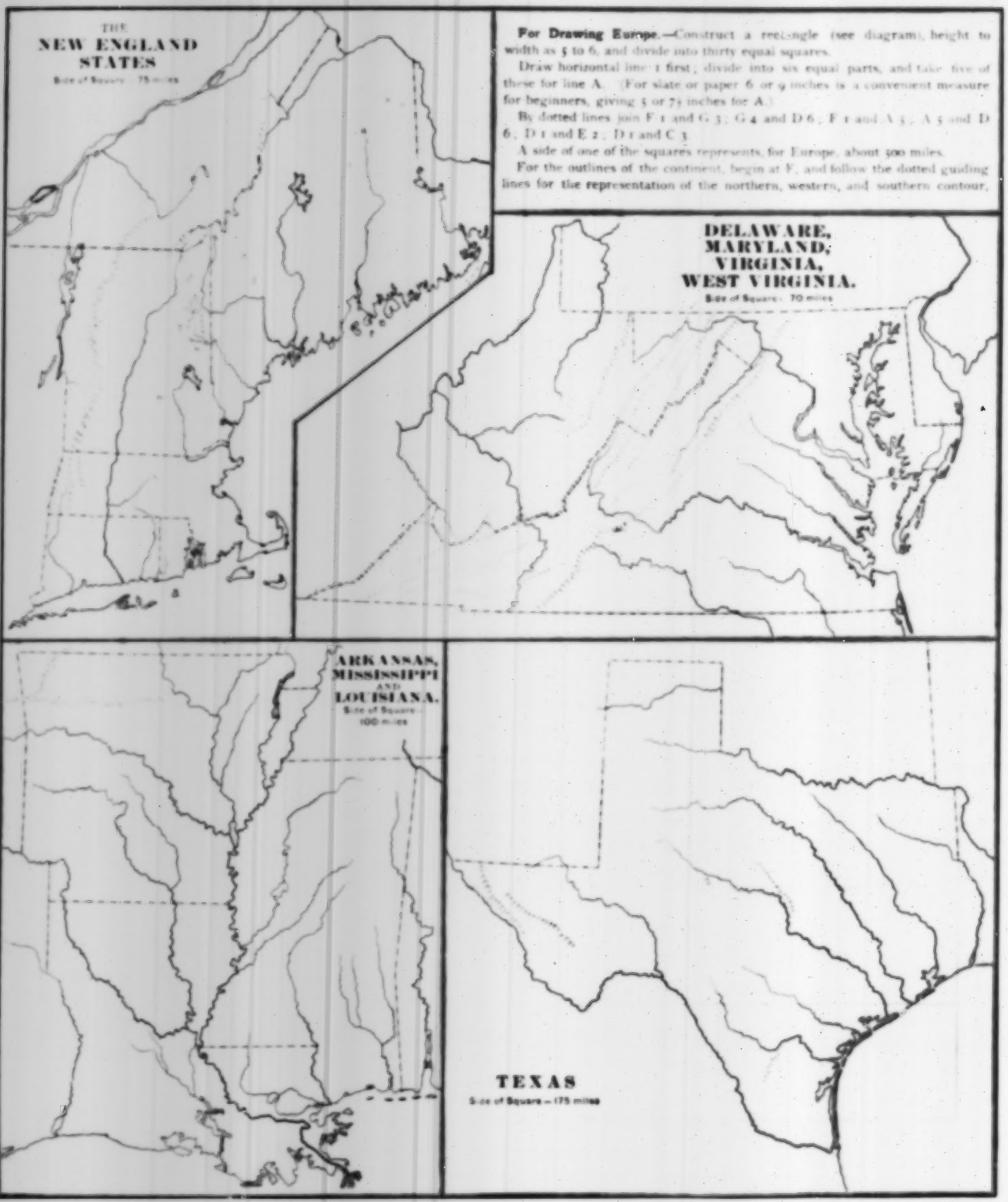
For Drawing South America.—Construct a rectangle (see diagram), width to height as 4 to 6, and divide into 24 equal squares, as in diagram for North America.

By dotted lines join B 1 and E 3; E 3 and B 7; B 1 and A 1; A 3 and B 4.

A side of one of the squares represents, for South America, about 800 miles.

Draw contour line as in previous map, also locate islands, add mountains, rivers, and political divisions.

After a little practice only the lines B and 3 and the dotted lines need be retained.



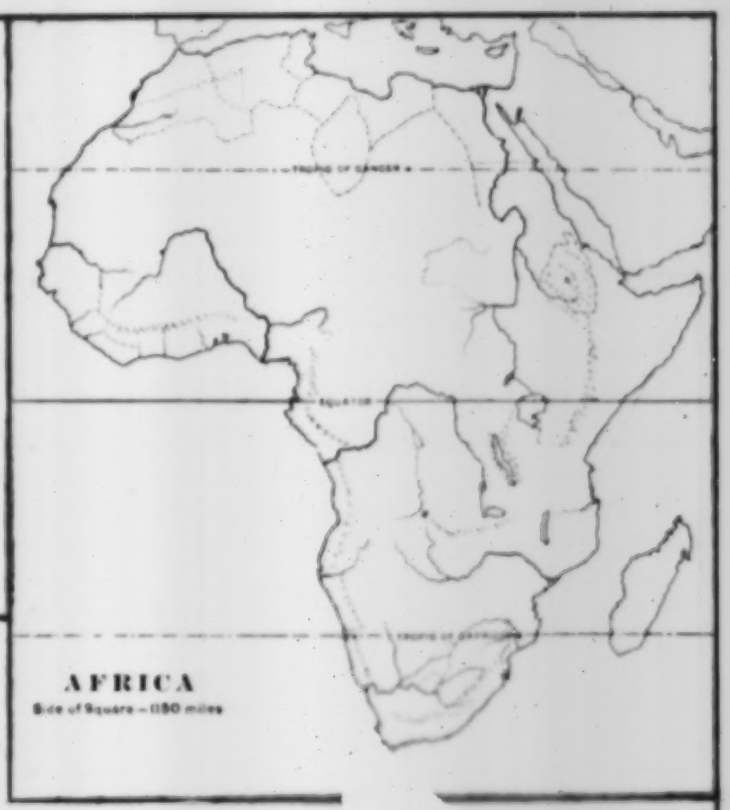
For Drawing Europe.—Construct a rectangle (see diagram), height to width as 5 to 6, and divide into thirty equal squares.

Draw horizontal line 1 first; divide into six equal parts, and take five of these for line A. (For slate or paper 6 or 9 inches is a convenient measure for beginners, giving 5 or 7½ inches for A.)

By dotted lines join F 1 and G 3; G 4 and D 6; F 1 and A 5; A 5 and D 6; D 1 and E 2; D 1 and C 3.

A side of one of the squares represents, for Europe, about 500 miles.

For the outlines of the continent, begin at F, and follow the dotted guiding lines for the representation of the northern, western, and southern contour.



adding the southern shore of the Mediterranean and of the Black Sea. Returning to F, carry a dotted line along the course of the Ural Mountains, trace the Ural River to its mouth, and draw the western, and then the northern, eastern, and southern shores of the Caspian.

After sufficient practice, the vertical and horizontal guiding lines may be omitted. This should not be done too soon, as the use of these lines secures accuracy in the location of principal features.

For Drawing Asia.—Construct a rectangle (see diagram), height to width as 4½ to 6. (Draw line 1 first. It may be, conveniently for paper or slate, 6 or 9 inches in length; for blackboard, 18 or 24 inches.) Divide into twenty-four squares and six half squares, the lin[illegible] the lower side of the figure.

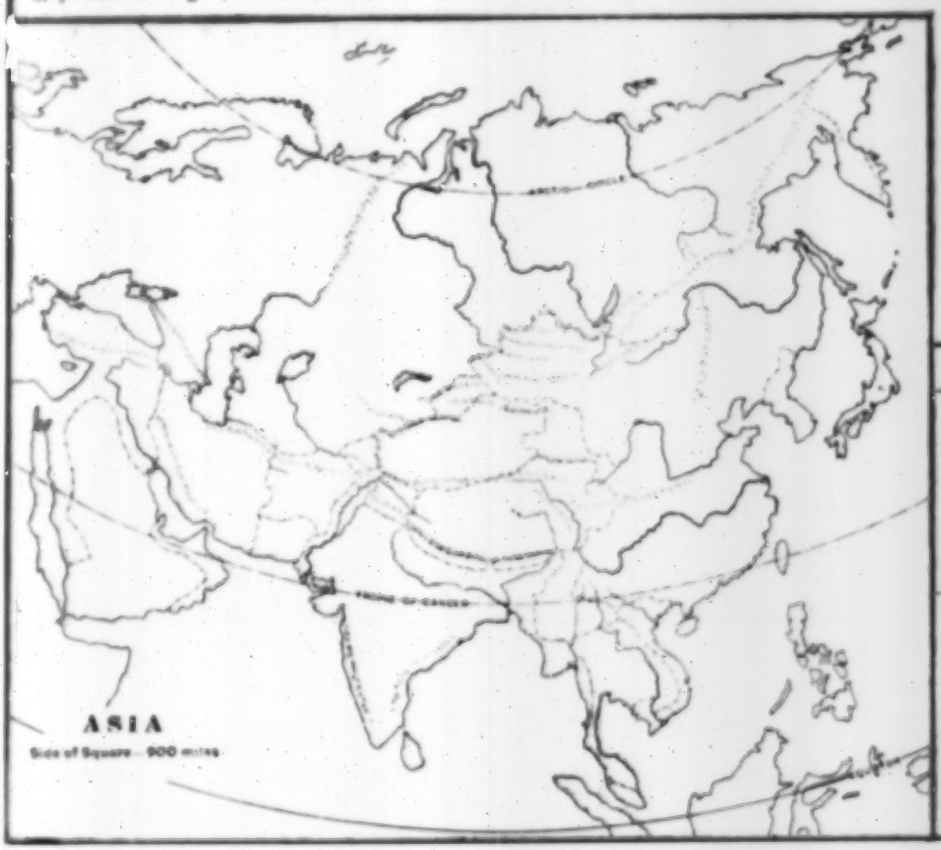
Extend the line E downward, a [illegible] of a half the side of a square, to 7. Join G 1 and 7; A 3 [illegible] 7; D 1 and B 4. Draw a line from G [illegible] A 3 till it intersects D 1-B 4.

A side of one of the squares represents, for Asia, about 900 miles.

Beginning at G, represent the northern contour, the Ural Mountains, the Ural River, Caspian Sea, Caucasus Mountains, Black Sea, and eastern end of the Mediterranean. Returning to G, represent the eastern and southern contour of the continent and both shores of the Red Sea.

The lines 1, A, E 7, and the dotted lines will be sufficient for final practice.

For Drawing Africa.—Construct a rectangle (see diagram), height to width as 4½ to 4. (Draw line 1,



conveniently for paper 6 or 9 inches in length.) Divide into four parts, of which take four and a half for line A, and divide into sixteen equal squares and four half squares, the latter being on the upper side of the figure. At centre of square contained by lines B and C, and 3 and 4, take point 7.

Join B 1 and D 2; D 2 and E 3; E 3 and D 5; D 5 and C 6; B 1 and A 3; A 3 and 7; 7 and C 6.

A side of a square represents, for Africa, about 1,150 miles.

For the contour line, begin near point B and follow the oblique guiding lines for the western coast. Returning to B, represent the southern coast of the Mediterranean; then commence at northern extremity of the Red Sea and represent the western and the eastern coasts of it, following the oblique guiding lines for the eastern coast of the continent.

For Drawing Australia.—Construct a rectangle (see diagram), height to width as 2½ to 3. Draw a horizontal line 1; divide into three equal parts, of which take two and a half for line A. Divide into six equal squares and three half squares, the latter being at the lower part of the rectangle.

A side of a square represents for Australia, about 840 miles.

For the contour line, begin at northern part of North Australia, and draw the western coast; returning to the same point, draw northern, eastern, and southern coasts.

For Drawing the United States.—Construct a rectangle (see diagram), width to height as 2 to 1 (on paper 6 inches is a convenient measure for line A), and divide into smaller rectangles, thus: Divide line A into six equal parts, and draw the horizontal lines 2, 3, 4, 5, 6; bisect the line 1, and divide the left half into *four* and the right half into *three* equal parts, and from dividing points draw the vertical lines B, C, D, E, F, G.

Extend the lines E and G downward, each a distance equal to one-half the distance between the points A and B, to 8 and 9. Take the point 10, on line 1, half way from A to B; take the point 11, on the line 6, half way between C and D; point 12 on line 1, one-fourth the distance from E to F; and point 13 on line 3, half way between F and G.

Join points 12 and 13; 13 and H 1; H 1 and 9; F 6 and 9; F 6 and 8; 11 and 8; 10 and A 4; A 4 and B 6.

The distance between the horizontal lines represents about 240 miles.

For the outlines of the country, begin half way between 10 and B, and carry a dotted straight line to a point just beyond E.

Next draw the Great Lakes, beginning at the eastern end of Lake Superior, and drawing first the northern, then the southern shore; then Lake Michigan and Lake Huron; next represent the Lake of the Woods and the boundary to Lake Superior; then Erie and Ontario, and the St. Lawrence River; then the remaining northern boundary.

Draw the eastern and southern contour lines as suggested by the oblique guiding lines as far as to point 8; also the western, from 10 to near B 6; then represent the Rio Grande River, and last the southern boundary line.

After learning to locate the mountains and rivers, the *groups* of states may be located, and after the groups the individual States of each group.

For Drawing the New England States.—Construct a rectangle (see diagram), width to height as 1 to 2. Divide line A 6 inches will be found convenient for paper) into four parts by 1, 2, 3, 4, 5. From point 1 draw horizontal line equal to two of these parts, and divide rectangle into eight equal squares by line B, and 2, 3, 4. Extend the line 1 from C to D, the width of two squares; extend the line C upward an equal distance to E, and complete the square C, D, F, E.

Connect points D and C 2. Extend line 5 to the left, a distance equal to one-half the side of a square, to G, and connect points 1 and G.

A side of one of the squares represents, for this map, about 75 miles.

For the outlines, begin at the extreme northern point of Maine, and draw western side to the south-western point of Connecticut; return and draw eastern and southern side to the same point.

For Drawing Delaware, Maryland, Virginia, and West Virginia.—Construct a rectangle (see diagram), height and width equal (4 or 6 inches is a convenient measure for slate or paper), and divide into sixteen equal squares.

Extend the line 5 to the left, a distance equal to the width of two squares, to F, and join A 1 and F.

Extend the line 3 to the right, a distance equal to half the width of a square, to G, and join E 1 and G. G and E 5.

A side of one of the squares represents, for this map, about 70 miles.

For the outlines, begin at the extreme northern point, and drain the western and southern boundaries, returning to the first point, draw the northern and eastern boundaries.

For Drawing Arkansas, Mississippi, and Louisiana.—Construct a rectangle (see diagram), height to width as 5 to 3, and divide into fifteen equal squares. Extend the lines 2 and 5 toward the right, the first a distance equal to the side of a square, to E, the second half as long, to F; join E F.

A side of one of the squares represents, for this map, about 100 miles.

In drawing, first represent the Mississippi River, then the other boundaries in the usual manner.

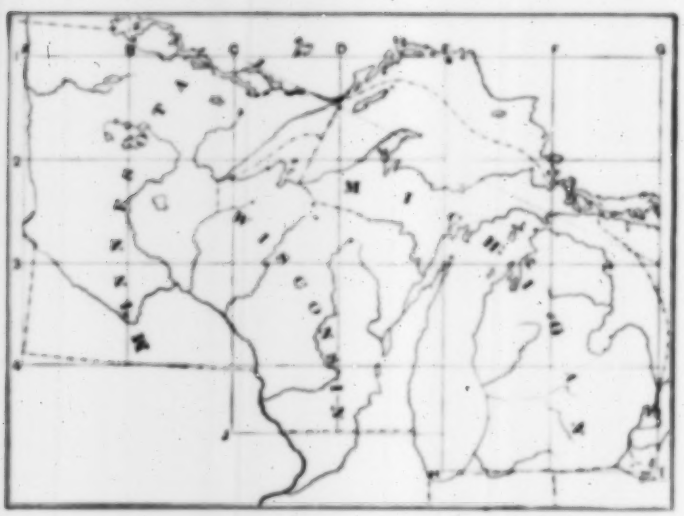
For Drawing Texas.—Construct a rectangle (see diagram), height and width equal, and divide into nine equal squares. Extend the lines A and B upward to E and F, and form an additional square. Extend line 2 to the left, to G, and connect G and A 3. Extend line C downward to H, one-fourth the side of a square.

A side of a square represents, for Texas, about 175 miles.

In drawing outline, begin at north-west corner of the State and draw western boundary to mouth of the Rio Grande; returning, draw northern and eastern boundary to the same point.

How to Devise Diagrams.—After studying and applying the preceding diagrams and directions, little difficulty will be found in devising similar figures for such other maps as may require them.

For example, suppose you wish to plan a diagram for the map of Minnesota, Wisconsin, and Michigan. Examining the map, and applying the ruler to different portions of it, you soon notice that the distance from the southern boundary of Minnesota north to Rainy Lake is about half the distance from the western border of Minnesota to the eastern boundary of Michigan. This suggests a rectangle whose height is half its width. Tracing a light horizontal line through southern boundary of Minnesota across the map, you find the distance from this line to the southern border of Michigan equal to about one-third the north and south measurement of Minnesota just mentioned. This suggests division of line A into three parts, six of which form line 1, giving you a rectangle of 18 squares.



The extension of lines E, F, and G, downward, and the formation of two additional squares to include the southern portion of Michigan, and the extension of line C downward two-thirds the side of a square to J, etc., for southern boundary of Wisconsin, naturally follow, as well as the drawing of an oblique guiding line from G 3 to some point on line 1, as C, etc. You have found thus the plan of a very convenient diagram.

The next step is to *draw* the plan thus *devised*. For this purpose you need a copy of the map to be sketched.

A good copy may be made as follows: Lay tracing paper over the map, and upon this draw the rectangle and divide it into squares, as indicated above. Trace the boundaries, and such physical features as are to be retained; then remove the tracing-paper, and go over every line *on the back of it* with a very soft pencil; next place this tracing paper upon a blank sheet, the pencilled side down, and once more go over each line with any hard, smooth point. The black lines on the reverse side will, in this way, be transferred to the new surface, and an accurate map, with diagram, produced, which will only need to be finished with ink for preservation.

It is not supposed that all teachers who make use of map-drawing will find the exercises and plans of recitation here suggested best adapted for their classes. It is hoped, however, that in developing their own methods, they may find, among the suggestions made, many that will prove of value to them.

GEOGRAPHICAL AND STATISTICAL TABLES.

The Statistical Tables of the United States will be revised as soon as the returns of the Census of 1880 can be obtained.

DIMENSIONS OF THE EARTH.

Polar Diameter	7,899 miles.
Equatorial Diameter	7,925 "
Equatorial Circumference	24,899 "
Superficial Area	196,861,750 square miles.

HEIGHTS OF PRINCIPAL MOUNTAINS.

		Feet.
North America.		
Mount St. Elias,	Coast Mountains	17,900
Popocatepetl (volcano),	Mexico	17,784
Orizaba,	"	17,380
Mount Whitney,	Sierra Nevada	14,887
Mount Rainier,	Cascade Range	14,444
Mount Shasta,	Sierra Nevada	14,440
Mount Tyndall,	" "	14,386
Mount Dana,	" "	13,227
Mount Hood,	Cascade Range	11,225
Long's Peak,	Rocky Mountains	14,271
Pike's Peak,	" "	14,147
South America.		
Illampu,	Andes	24,812
Illimani,	"	24,155
Aconcagua,	"	23,421
Chimborazo (volcano),	"	21,424
Nevada de Sorata,	"	21,290
Arequipa,	"	20,320
Antisana (volcano),	"	19,137
Cotopaxi,	"	18,875
Europe.		
Elbruz (highest of Caucasus Mountains)		18,526
Mont Blanc,	Alps	15,784
Monte Rosa,	"	15,223
Finsteraarhorn,	"	14,039
Jungfrau,	"	13,718
Highest of Pyrenees,		11,200
Mount Etna (volcano),	Sicily	10,874
Mount Olympus,	Greece	9,745
Mount Vesuvius (volcano),	Italy	3,948
Africa.		
Kilima Njaro,	Central Africa	20,000
Teneriffe,	Canary Islands	12,182
Atlas Mountains (highest)		11,400
Kenia,	Central Africa	18,000
Asia.		
Everest,	Himalaya Mountains	29,100
Kanchinjinga,	" "	28,156
Dhawalagiri,	" "	28,000
Hindoo Koosh Mountains		20,000
Ararat,	Armenia	17,200
Fusiyama,	Japan	14,000

LENGTH OF PRINCIPAL RIVERS, AND AREA OF RIVER-BASINS.

Name	Length	Area of Basin
	Eng. miles	Square miles
North America.		
Mississippi (entire)	4,300	1,244,000
Mackenzie	2,300	443,000
St Lawrence	2,200	335,515
Saskatchewan	1,792	632,000
Yukon	2,000	200,000
Arkansas	2,000	190,000
Rio Grande	1,800	240,000
Red	1,000	97,000
Columbia	1,400	298,000
Colorado	1,000	257,000
Ohio	950	214,000
Brazos	950	34,000
Tennessee	800	41,000
South America.		
Amazon	3,750	2,510,000
La Plata (Parana)	2,500	1,242,000
Orinoco	1,600	340,000
Madeira	2,000	
San Francisco	1,200	250,000
Europe.		
Volga	2,300	400,000
Danube	2,000	300,190
Dnieper	1,230	242,000
Don	1,325	170,000
Rhine	900	65,280
Asia.		
Yenesei	3,400	1,000,000
Yang-tse-kiang	3,320	547,800
Obi	3,000	924,800
Lena	2,800	800,000
Amoor	2,650	780,000
Brahmapootra	2,300	450,000
Indus	2,000	312,000
Euphrates	1,780	230,000
Ganges	1,900	432,480
Irrawaddy	1,200	331,200
Africa.		
Nile	4,100	1,425,000
Niger	3,000	900,000
Zambezi	1,800	900,000
Australia.		
Murray	1,500	500,000

AREA AND POPULATION OF THE WORLD.

	Area in sq. miles	Population
North America	8,924,769	58,841,082
South America	7,082,148	27,109,118
Europe	3,950,555	299,290,396
Asia	15,742,000	795,000,000
Africa	11,733,834	174,239,000
Australia and Oceania	3,609,027	30,192,000
Antarctic Land	300,000	
Total	51,305,133	1,385,002,104

PRINCIPAL RELIGIONS OF THE WORLD.

Christians	375,000,000
Jews	7,000,000
Mohammedans	130,000,000
Buddhists and other Asiatic Religions	483,000,000
Brahmins	150,000,000
Pagans	200,000,000

POPULATION OF PRINCIPAL TOWNS AND CITIES OF THE WORLD.

(From the United States Census of 1870, and the most recent foreign authorities.)

NORTH AMERICA.

United States.

Maine.	
Augusta	7,808
Portland	31,413
Bangor	18,289
Lewiston	13,600
Biddeford	10,282
Bath	7,371
Rockland	7,080
New Hampshire.	
Concord	12,241
Manchester	23,536
Nashua	10,543
Dover	9,294
Portsmouth	9,211
Keene	6,000
Vermont.	
Montpelier	3,023
Burlington	14,387
Rutland	9,834
St. Albans	7,000
Massachusetts.	
Boston,	250,526
Charlestown,	28,323
Worcester	41,105
Lowell	40,928
Cambridge	39,634
Lawrence	28,921
Lynn	28,233
Fall River	26,766
Springfield	26,703
Salem	24,117
New Bedford	21,320
Taunton	18,629
Gloucester	15,397
Chelsea	18,547
Rhode Island.	
Providence	68,904
Newport	12,521
Woonsocket	11,527
Connecticut.	
Hartford	37,180
New Haven	50,840
Bridgeport	18,969
Norwich	16,653
Norwalk	12,119
Waterbury	10,826
Meriden	10,495
New London	9,576
New York.	
Albany	69,422
New York	942,292
Brooklyn	396,099
Buffalo	117,714
Rochester	62,386
Troy	46,465
Syracuse	43,051
Utica	28,804
Oswego	20,910
Poughkeepsie	20,080
Auburn	17,225
Newburg	17,014
Elmira	15,863
Cohoes	15,357
Binghamton	12,692
Lockport	12,426
New Jersey.	
Trenton	22,874
Newark	105,059
Jersey City	82,546
Paterson	33,579
Elizabeth	20,832
Camden	20,045
Hoboken	20,297
New Brunswick	15,058
Princeton	3,986
Pennsylvania.	
Harrisburg	23,104
Philadelphia	674,022
Pittsburgh	86,076
Allegheny City	53,180
Scranton	35,092
Reading	33,930
Lancaster	20,233
Erie	19,646
Williamsport	16,030
Allentown	13,884
Pottsville	12,384
Delaware.	
Dover	1,906
Wilmington	30,841
Maryland.	
Annapolis	5,744
Baltimore	267,354
Frederick	8,526
Cumberland	8,000
District of Columbia.	
Washington	109,199
Georgetown	11,384
Virginia.	
Richmond	51,038
Norfolk	19,229
Petersburg	18,950
Alexandria	13,570
Portsmouth	10,492
Lynchburg	6,825
West Virginia.	
Wheeling	19,280
Charleston	3,162
Parkersburg	5,516
North Carolina.	
Raleigh	7,790
Wilmington	13,446
New Berne	5,849
Charlotte	4,473
Fayetteville	4,660
Kinston	4,000
South Carolina.	
Columbia	9,298
Charleston	48,956
Beaufort	5,511
Georgetown	3,500
Greenville	4,135
Georgia.	
Atlanta	21,789
Savannah	28,235
Augusta	15,389
Macon	10,810
Columbus	7,400
Athens	4,251
Rome	3,106
Florida.	
Tallahassee	2,023
Jacksonville	6,912
Key West	5,000
Pensacola	3,347
St. Augustine	1,717
Alabama.	
Montgomery	10,588
Mobile	32,034
Selma	6,484
Huntsville	4,900
Mississippi.	
Jackson	4,234
Vicksburg	12,443
Natchez	9,060
Columbus	4,812
Meridian	2,700
Louisiana.	
New Orleans	191,418
Baton Rouge	6,498
Shreveport	4,600
Monroe	1,949
Arkansas.	
Little Rock	12,380
Helena	2,249
Fort Smith	2,227
Tennessee.	
Nashville	25,865
Memphis	40,226
Knoxville	8,682
Chattanooga	6,093
Texas.	
Austin	4,428
Galveston	13,818
San Antonio	12,256
Houston	9,382
Dallas	5,000
Denison	5,000
Waco	6,500
Indian Territory.	
Tahlequah	1,000
Kentucky.	
Frankfort	5,396
Louisville	100,753
Covington	24,505
Newport	15,087
Lexington	14,801
Paducah	6,866
Maysville	4,705
Ohio.	
Columbus	31,274
Cincinnati	216,239
Cleveland	92,829
Toledo	31,584
Dayton	30,473
Sandusky	13,000
Springfield	12,652
Hamilton	11,081
Portsmouth	10,592
Zanesville	10,011
Indiana.	
Indianapolis	48,244
Evansville	21,830
Fort Wayne	17,718
Terre Haute	16,103
New Albany	15,396
Lafayette	13,506
Madison	10,709
Richmond	9,445
Logansport	9,000
Illinois.	
Springfield	17,364
Chicago	298,977
Quincy	24,052
Peoria	22,849
Bloomington	14,590
Aurora	11,162
Rockford	11,049
Galesburg	10,158
Jacksonville	9,203
Galena	7,000
Cairo	6,267
Michigan.	
Lansing	5,241
Detroit	79,577
Grand Rapids	16,507
Jackson	11,447
East Saginaw	11,350
Kalamazoo	9,181
Ann Arbor	7,363
Wisconsin.	
Madison	9,176
Milwaukee	71,440
Fond du Lac	12,764
Oshkosh	12,663
Racine	10,000
Missouri.	
Jefferson City	4,420
St. Louis	310,864
Kansas City	32,260
St. Joseph	19,565
Hannibal	10,125
St. Charles	5,570
Springfield	5,555
Iowa.	
Des Moines	12,035
Davenport	20,038
Dubuque	18,434
Burlington	14,930
Keokuk	12,766
Council Bluffs	10,020
Muscatine	6,718
Iowa City	6,000
Minnesota.	
St. Paul	20,030
Minneapolis	13,000
Winona	7,192
Stillwater	4,124
Mankato	3,482
Hastings	3,458
Kansas.	
Topeka	5,790
Leavenworth	17,873
Lawrence	8,320
Atchison	7,054
Nebraska.	
Lincoln	2,441
Omaha	16,083
Nebraska City	6,050
Dakota.	
Yankton	1,000
Pembina	1,500
New Mexico.	
Santa Fé	4,765
Wyoming.	
Cheyenne	1,450
Montana.	
Virginia City	1,000
Helena	3,107
Nevada.	
Carson City	3,000
Arizona.	
Tucson	3,224
Utah.	
Salt Lake City	12,854
Idaho.	
Boisé City	1,000
Idaho City	1,000
California.	
Sacramento	16,283
San Francisco	149,473
Oakland	10,500
Stockton	10,066
San José	9,089
Los Angeles	5,727
Marysville	4,739
Oregon.	
Salem	1,139
Portland	8,000
Washington.	
Olympia	1,348

British America.	
Montreal, Queb.	107,225
Quebec, Queb.	59,699
Toronto, Ont.	56,092
Halifax, N. S.	29,582
St. John, N. B.	28,805
St. Johns, N. F.	22,553
Ottawa, Ont.	21,545
Mexico.	
Mexico	200,000
Leon	78,000
Guadalajara	70,917
Puebla	75,000
Guanajuato	63,000
Queretaro	47,570
Central America.	
New Guatemala	45,000
San José	18,000
San Salvador	16,087
West Indies.	
Havana, Cuba	205,676
Santiago	45,000
Kingston, Jamaica	34,314
Port au Prince, Hayti	30,085
San Juan de Porto Rico	27,000
San Domingo	12,000

SOUTH AMERICA.

Brazil.	
Rio Janeiro	274,972
Bahia	129,109
Pernambuco	116,671
Maranham	31,604
Guiana.	
Georgetown	36,567
Paramaribo	22,000
Cayenne	10,000
Venezuela.	
Caracas	48,897
Maracaybo	21,954
U. S. of Colombia.	
Bogota	50,000
Cartagena	9,000
Panama	11,000
Popayan	20,000
Ecuador.	
Quito	70,000
Guayaquil	22,000
Peru.	
Lima	100,000
Cuzco	50,000
Callao	34,492

Bolivia.

La Paz	76,372
Cochabamba	[illegible]
Sucre	[illegible]

Chili.

Santiago	150,367
Valparaiso	97,737

Argentine Confederation.

Buenos Ayres	177,787
Cordova	28,523
Rosario	23,169

Paraguay.

Asuncion	50,000

Uruguay.

Montevideo	91,167

EUROPE.

England and Wales.

London	3,445,160
Liverpool	516,063
Manchester	356,626
Birmingham	377,436
Leeds	259,212
Sheffield	239,946
Bristol	192,523
Bradford	145,830
Newcastle	128,443
Hull	140,002
Merthyr Tydvil	97,020

Scotland.

Glasgow	498,513
Edinburgh	196,979
Dundee	142,951
Aberdeen	88,189

Ireland.

Dublin	267,717
Belfast	174,412
Cork	78,642

Russia.

St. Petersburg	667,963
Moscow	601,969
Warsaw	302,475
Odessa	184,819
Riga	98,082
Astrakhan	48,220
Cronstadt	47,166
Nijni-Novgorod	44,190
Archangel	19,936

Norway.

Christiania	106,000
Bergen	34,284

Sweden.

Stockholm	175,677
Gottenburg	60,765

Spain.

Madrid	367,284
Barcelona	215,965
Malaga	94,732
Valencia	102,580
Seville	118,000
Granada	67,326
Cadiz	52,000

Portugal.

Lisbon	253,496
Oporto	89,194

Italy.

Naples	449,301
Milan	290,877
Rome	229,357
Palermo	225,003
Turin	207,770
Florence	167,093
Genoa	130,269
Venice	128,901
Bologna	115,957
Messina	111,854
Leghorn	97,096

Greece.

Athens	44,510
Syra	20,996

Turkey.

Constantinople	700,000
Adrianople	150,000

Roumania.

Bucharest	221,805
Jassy	90,000
Galatz	80,000

Servia.

Belgrade	27,605

France.

Paris	1,988,806
Lyons	342,815
Marseilles	318,868
Bordeaux	215,140
Lille	162,775
Toulouse	131,642
Nantes	118,000
Rouen	104,902
Havre	92,068
Brest	66,828
Toulon	70,509
Versailles	49,552

Germany.

Berlin	966,858
Hamburg	264,675
Breslau	239,050
Dresden	197,295
Munich	198,829
Elberfeld-Barmen	146,000
Cologne	135,371
Konigsberg	122,636
Leipsic	127,387
Hanover	107,000
Stuttgart	107,273
Frankfort-on-the-Main	103,136
Dantzic	97,931
Strasbourg	92,379
Magdeburg	84,000
Bremen	102,532
Nuremberg	91,017

Netherlands.

Amsterdam	289,982
Rotterdam	125,097
The Hague	104,095

Belgium.

Brussels	183,000
Antwerp	148,814
Ghent	127,653
Liege	118,140

Denmark.

Copenhagen	197,576

Austria.

Vienna	1,001,999
Buda-Pesth	300,208
Prague	189,949
Gratz	81,119
Trieste	109,324

Switzerland.

Geneva	68,165
Basle	44,834
Berne	36,000
Zurich	21,199

ASIA.

China.

Hankow	1,000,000
Peking	1,020,000
Canton	1,000,000
Tientsin	950,000
Hang Chow	800,000
Foo Chow	500,000
Nanking	500,000
Ningpo	400,000
Shanghai	250,000
Hong Kong	124,104
Yarkand	120,000
Kashgar	70,000

Japan.

Tokio (Yedo)	780,000
Osaka	530,887
Kioto	567,334
Yokohama	61,553

Indo-China.

Bankok	500,000
Hue	100,000
Saigon	90,000
Singapore	56,000

British India.

Calcutta	892,429
Bombay	644,400
Madras	397,552
Lucknow	285,000
Hyderabad	200,000
Patna	158,900
Benares	175,000
Delhi	154,417
Colombo	97,129
Cashmere	51,095

Afghanistan.

Cabul	60,000
Kandahar	50,000
Herat	45,000

Persia.

Tabriz	100,000
Teheran	100,000
Meshed	70,000
Ispahan	60,000

Arabia.

Mecca	45,000
Muscat	35,000

Asiatic Turkey.

Smyrna	180,000
Damascus	150,000
Beirut	100,000
Erzeroum	75,000
Brussa	60,000
Jerusalem	25,000

Asiatic Russia.

Tashkend	80,000
Tiflis	70,791
Irkutsk	32,321
Bokhara	80,000
Tobolsk	17,407
Kiachta	4,096

AFRICA.

Egypt.

Cairo	349,883
Alexandria	212,054
Damietta	29,383
Suez	13,498
Port Said	8,761

Barbary States.

Tunis	125,000
Fez	60,000
Mequinez	100,000
Morocco	40,000
Algiers	52,702

Zanguebar.

Zanzibar	80,000

AUSTRALIA.

Melbourne	247,079
Sydney	134,747
Adelaide	27,208
Hobart Town	19,092
Auckland	12,937

Malaysia.

Manila	160,000
Samarang	60,000
Batavia	99,109

GROWTH OF THE UNITED STATES IN POPULATION FOR 50 YEARS.

STATES.	1870.	1860.	1850.	1840.	1830.	1820.
Alabama	996,992	964,201	771,623	590,756	309,527	127,901
Arkansas	484,471	435,450	209,897	97,574	30,388	14,255
California	560,247	379,994	92,597	—	—	
Colorado	39,864	34,277	—			
Connecticut	537,454	460,147	370,792	309,978	297,675	275,148
Delaware	125,015	112,216	91,532	78,085	76,748	72,749
Florida	187,748	140,424	87,445	54,477	34,730	—
Georgia	1,184,109	1,057,286	906,185	691,392	516,823	340,985
Illinois	2,539,891	1,711,951	851,470	476,183	157,445	55,162
Indiana	1,680,637	1,350,428	988,416	685,866	343,031	147,178
Iowa	1,194,020	674,913	192,214	43,112	—	—
Kansas	364,399	107,206	—	—	—	—
Kentucky	1,321,011	1,155,684	982,405	779,828	687,917	564,135
Louisiana	726,915	708,002	517,762	352,411	215,739	152,923
Maine	626,915	628,279	583,169	501,793	399,455	298,269
Maryland	780,894	687,049	583,034	470,019	447,040	407,350
Massachusetts	1,457,351	1,231,066	994,514	737,699	610,408	523,159
Michigan	1,184,059	749,113	397,654	212,267	31,639	8,765
Minnesota	439,706	172,023	6,077	—		—
Mississippi	827,922	791,305	606,526	375,651	136,621	75,448
Missouri	1,721,295	1,182,012	682,044	383,702	140,455	66,557
Nebraska	122,993	28,841	—	—	—	—
Nevada	42,491	6,857	—	—	—	—
New Hampshire	318,300	326,073	317,976	284,574	269,328	244,022
New Jersey	906,096	672,035	489,555	373,306	320,823	277,426
New York	4,382,759	3,880,735	3,097,394	2,428,921	1,918,608	1,372,111
North Carolina	1,071,361	992,622	869,039	753,419	737,987	638,829
Ohio	2,665,260	2,339,511	1,980,329	1,519,467	937,903	581,295
Oregon	90,923	52,465	13,294			—
Pennsylvania	3,521,791	2,906,215	2,311,786	1,724,033	1,348,233	1,047,507
Rhode Island	217,353	174,620	147,545	108,830	97,199	83,015
South Carolina	705,606	703,708	668,507	594,398	581,185	502,741
Tennessee	1,258,520	1,109,801	1,002,717	829,210	681,904	422,771
Texas	818,579	604,215	212,592	—	—	—
Vermont	330,551	315,098	314,120	291,948	280,652	235,966
Virginia	1,225,163	1,596,318	1,421,661	1,239,797	1,211,405	1,065,116
West Virginia	442,014	—	—	—	—	—
Wisconsin	1,054,670	775,881	305,391	30,945	-	—
Territories	[illegible]	[illegible]	124,614	43,112	35,834	52,699

STATISTICS OF AGRICULTURE IN THE UNITED STATES, 1870. MANUFACTURING. MINING.

States and Territories.	Improved Land, Acres.	Wheat, Bushels.	Corn, Bushels.	Oats, Bushels.	White Potatoes, Bushels.	Sweet Potatoes, Bushels.	Rice, Pounds.	Tobacco, Pounds.	Cotton, Bales.	Wool, Pounds.	Butter, Pounds.	Hay, Tons.	Cane Sugar, Hhds.	Manufacturing: Capital.	Manufacturing: Products.	Mining: Capital.	Mining: Products.
Alabama	5,062,204	1,055,069	16,977,948	770,866	162,512	1,871,360	222,945	152,742	429,482	381,253	3,213,753	10,628	31	$5,714,032	$13,040,644	$39,000	$52,500
Arizona	14,585	27,052	32,041	25	525	16		116		879	900	109		150,700	185,410	5,500	24,500
Arkansas	1,859,821	741,736	13,382,145	528,777	432,196	400,621	73,021	594,886	247,968	214,784	2,753,931	6,089	92	1,782,913	4,629,234		
California	6,218,133	16,676,702	1,221,222	1,757,507	2,049,227	208,065		63,809	34	11,391,743	7,969,744	551,773		39,728,202	66,594,556	20,079,875	8,281,638
Colorado	95,594	258,474	232,903	332,941	121,442	90		900		204,925	392,920	19,787		2,835,605	2,852,820	2,905,805	809,374
Connecticut	1,646,752	38,144	1,570,364	1,114,595	2,789,894	667		8,328,798		254,129	6,716,007	563,328		95,281,278	161,065,474	1,086,102	1,227,400
Dakota	42,645	170,662	133,140	114,327	50,177	—				5,810	209,735	13,347		79,200	178,570		
Delaware	698,115	895,477	3,010,390	354,300	362,720	65,790		250	—	56,316	1,171,963	41,860		10,839,093	16,791,382	60,250	10,800
Dis. of Col.	8,266	3,782	29,020	8,268	47,987	5,780					4,065	2,019		5,021,925	9,292,173		
Florida	736,172		2,225,056	114,204	70,218	789,456	401,687	157,405	39,789	37,562	100,989	17	952	1,679,930	4,685,403		
Georgia	6,831,856	2,127,017	17,646,459	1,904,601	197,101	2,621,562	22,277,380	288,596	473,934	846,947	4,499,572	10,518	644	13,930,125	31,196,115	145,000	49,290
Idaho	26,603	75,650	5,750	100,119	64,504	—				3,415	111,490	6,985		742,500	1,047,624	1,096,640	1,390,341
Illinois	19,329,952	30,128,405	129,921,395	42,780,851	10,944,790	322,641	—	5,249,274	465	5,739,249	36,083,405	2,747,339		94,368,057	205,620,672	4,014,123	6,304,392
Indiana	10,104,279	27,747,222	51,094,538	8,590,409	5,399,044	150,705		9,325,392	3	5,029,023	22,915,385	1,076,768		52,052,425	108,617,278	610,092	1,137,172
Iowa	9,396,467	29,435,692	68,935,065	21,005,142	5,914,620	34,292		71,792		2,967,043	27,512,179	1,777,339		22,420,183	46,534,322	726,024	1,693,484
Kansas	1,971,003	2,391,198	17,025,525	4,097,925	2,342,988	49,533		33,241	7	335,005	5,022,758	490,289		4,319,060	11,775,833	179,130	174,458
Kentucky	8,103,850	5,728,704	50,091,006	6,620,103	2,391,062	802,114		105,305,869	1,080	2,234,450	11,874,978	204,399		29,277,809	54,625,809	761,450	569,245
Louisiana	2,045,640		7,596,628	17,782	67,695	1,983,706	15,854,012	15,541	350,832	140,428	322,405	8,776	80,706	18,313,974	24,161,905	300	1,200
Maine	2,917,793	278,793	1,089,888	2,351,354	7,771,009	274		15		1,774,168	11,636,482	1,053,415		39,796,190	79,497,521	397,708	621,738
Maryland	2,914,007	5,774,508	11,701,817	3,221,643	1,632,205	218,706		15,785,339		435,213	5,014,729	223,119		36,438,729	76,593,613	85,008,730	3,444,181
Massachusetts	1,736,221	34,649	1,397,807	797,664	3,025,446	917		7,312,885		399,420	6,559,161	597,455		231,677,862	553,912,568	944,250	1,093,502
Michigan	5,096,939	16,265,773	14,086,238	8,954,466	10,318,799	3,631		5,385		8,726,145	24,400,185	1,290,923		71,712,283	118,394,676	9,592,874	7,190,118
Minnesota	2,322,102	18,866,073	4,743,117	10,678,261	1,943,063	1,394		8,247		401,185	9,522,010	695,053		11,993,729	23,110,700	18,540	35,850
Mississippi	4,209,146	274,479	15,637,316	414,586	274,179	1,743,432	374,627	61,012	564,938	288,285	2,613,521	8,324	49	4,501,714	8,154,758		
Missouri	9,130,615	14,315,926	66,034,075	16,578,313	4,238,361	241,253		12,320,483	1,246	3,649,390	14,455,825	615,611	49	80,257,244	206,213,429	3,000,250	3,478,513
Montana	84,674	541,194	920	109,237	91,477			400		100	428,060	18,727		1,794,300	2,494,511	2,518,613	4,020,435
Nebraska	647,031	2,125,086	4,736,710	1,477,562	739,984	792		5,988		74,655	1,539,585	189,374		2,169,963	5,738,512	14,050	30,140
Nevada	92,644	229,666	9,660	55,916	129,249			25	169	27,029	110,660	33,855		5,127,790	15,870,539	32,252,400	11,166,452
N. Hampshire	2,334,487	193,621	1,277,768	1,146,451	4,515,419	190		155,334		1,129,442	5,965,080	612,648		36,023,743	71,038,249	208,450	328,405
New Jersey	1,976,474	2,301,433	8,745,384	4,009,939	4,705,439	1,550,784		48,871		336,609	8,266,023	521,975		79,606,719	169,237,732	2,501,700	2,554,475
New Mexico	143,007	352,822	640,823	67,660	3,108			8,587		684,930	12,912	4,209		1,450,095	1,489,868	2,394,000	143,250
New York	15,627,206	12,178,462	16,462,825	35,293,625	28,547,593	10,656		2,349,798		10,599,225	107,147,526	5,614,205		366,994,320	785,194,651	4,006,093	4,324,651
N. Carolina	5,258,742	2,859,879	18,454,215	3,220,105	[illegible]	3,071,840	2,059,281	11,150,087	144,935	799,667	4,297,834	80,540	55	8,140,473	19,021,327	1,852,100	626,382
Ohio	14,469,133	27,882,159	67,501,144	25,347,549	11,192,814	229,293		18,741,973		20,539,643	50,266,372	2,289,565		141,923,964	269,713,610	9,017,197	7,751,544
Oregon	1,116,290	2,340,746	72,138	2,029,909	491,710	1,970		3,847		1,080,638	1,418,373	71,357		4,376,849	6,877,387	321,500	411,797
Pennsylvania	11,515,965	19,672,967	34,702,006	36,478,585	12,889,367	191,578		3,467,539		6,561,722	60,834,644	2,848,219		406,821,845	711,894,344	84,080,276	76,208,390
Rhode Island	289,030	784	311,957	157,010	609,609	142		786		77,328	941,199	80,045		66,557,322	111,418,354	90,000	59,030
S. Carolina	3,010,539	783,610	7,614,207	613,593	83,252	1,342,165	32,304,825	34,805	224,500	136,314	1,461,980	10,665	1,055	5,400,418	9,858,981	137,000	19,988
Tennessee	6,843,278	6,188,916	41,343,614	4,513,315	1,124,387	1,205,683	3,399	21,465,452	181,842	1,389,762	9,571,069	116,582	1,410	15,595,295	34,362,636	944,980	770,292
Texas	2,964,836	415,112	20,554,538	762,663	199,863	2,188,041	63,844	59,706	350,628	1,251,328	3,712,747	18,982	2,020	5,284,110	11,517,302	158	900
Utah	118,755	508,473	95,557	65,650	323,645	183			22	109,018	310,335	27,305		1,391,898	2,343,019	44,800	14,950
Vermont	3,073,257	454,703	1,699,882	3,602,430	5,157,428	96		72,671		3,102,137	17,844,396	1,020,669		20,329,637	32,184,606	2,094,700	805,430
Virginia	8,165,040	7,398,787	17,649,304	6,857,555	1,293,853	803,982		37,086,364	183	877,110	6,979,269	199,962		18,455,400	38,364,322	1,113,600	479,914
Washington	192,016	217,043	21,781	255,169	260,719	420		1,062		102,713	607,306	30,223		1,893,674	2,851,052	527,200	100,004
W. Virginia	2,580,254	2,483,543	8,197,865	2,413,749	1,052,587	46,294		2,046,452	2	1,595,541	5,044,475	204,164		11,084,520	24,102,201	2,754,490	2,528,581
Wisconsin	5,899,343	25,606,344	15,033,998	20,180,016	6,646,129	2,220		960,813		4,090,670	22,473,036	1,287,651		41,981,872	77,214,326	737,750	510,982
Wyoming	338			100	617					20,000	1,200	3,160		900,850	785,600	261,000	600,000
Total	188,921,099	287,745,626	760,944,549	282,107,157	143,337,473	21,709,824	73,635,021	262,735,341	3,011,996	100,102,387	514,092,683	27,316,048	87,043	$2,118,208,769	$4,232,325,442	$222,394,654	$152,598,994

PRONOUNCING VOCABULARY.

In this Vocabulary the best and most recent authorities have been consulted for both spelling and pronunciation. A or ay, ē, ī, ō, ū, are to be pronounced as in hate, mete, bite, note, tube; ă, ĕ, ĭ, ŏ, ŭ, as in hat, bet, bit, not, but. The sound of a in car is indicated by ah; a in fall, by aw; o in do, by oo; g in get, by gh. Ü represents the sound of eu in French, which resembles the sound of e in her. The nasal sound occurring in some French words is indicated by N, as Toulon, (too loN); this nasal sound is somewhat like that of ng sounded through the nose. Letters inclosed by ( ) indicate pronunciation. In some cases two accents will be found in one word. The principal accent is represented by ', the secondary by ''.

A.

Aalborg (ol'borg).
Aar (ahr).
Aarhuus (or'hoos).
Abyssinia (ab is sin'i a).
Ab er deen'.
Abomey (ab o mā').
Acapulco (ah kah pool'ko).
Accra (ah cher rah').
Aconcagua (ah kon kah'gwah).
Aden (ā'den or ah'den).
Adige (ad'i je; It. ah'de jā).
Ad i ron'dack.
Ad ri an o'ple.
Ad ri at'ic.
Aegean (ē jē'an).
Afghanistan (af ghan is tahn').
Agincourt (a zhaN koor').
Agulhas (ah gool'yas).
Aix la Chapelle (āks lah shă pel').
Ajaccio (ah yaht'cho).
Alabama (al a bah'ma).
Albans (awl'banz).
Al be marle'.
Alcala (ahl cah lah').
Alcira (Sp. ahl thē'rah).
Aleutian (al oo'shi an).
Albuquerque (ahl boo ker'kā).
Alderney (awl'der ney).
Alençon (ah lăN soN').
A lep'po.
Algiers (al jēērz').
Al i can'te.
Al le ghă'ny.
Allahabad (ahl lah hah bahd').
Almaden (ahl mah den').
Al sace' (al sass').
Altai (ahl tī').
Altamaha (al ta ma haw').
Am'boise (Fr. aN bwahz).
Amherst (am'erst).
Am'iens (Fr. pron. ah me aN').
Am'a zon.
Amoor (ah moor').
Amour (ah moor').
Amoy (ah moy').
Anadyr (an a dēr').
Anam (a nam' or a nahm').
An da man'.
An des (an'dēz).
An dor'ra.
An do ver.
An dros cog'gin.
Angara (an gah rah').
Anglesey (ang'g'l sē).
An go'ra.
An gos tu'ra.
Angoulême (oN goo lām').
Anko bar.
An nap'o lis.
An ti co'sti.
Antietam (an tē'tam).
Antigua (an tē'gwah).
An'tioch (an'te ok).
An tip'o des (or oN tēb').
A pa'che.
Ap pa lach'i an.
Ap pa la chi co'la.
Ap po mat'tox.
Ap en nines.
Ar'gh.
Araguay (ah rah gwī').
Ar a rat.
Ar au ca'nia (cahn'yah).
Archangel (ark ān'jel).
Archipelago (ark i pel'a go).
Ardennes (ar dĕn').
Arequipa (ar ē kē'pah).
Argentine (ar'jen tēn).
Argyle (ar gīl').
Arica (a rē'cah).
Ar kan'sas.
Arles (arl).
Armagh (ar mah' or ar mah').
A roos'took.
Arpino (ar pē'no).
Arras (air rah').
Ash an tee'.
Ash ta bu'la.
As sam (or as sam').
As sump'tion.
Asuncion (a soon the on').
As tra khan'.
Atacama (ah tah kah'mah).
Atchafalaya (ach a fa lī'a).
Ath a bas'ca.
Augustine (au gus tēn').
Auvergne (o vairn').
Aurungabad (o rung ga bahd').
Auxerre (o sair').
Avignon (ah vēn yoN').
Ava (ah'vah).
A'zov (az'of).
Az ores'.

B.

Bab el Man'deb.
Badajos (bad a hōs').
Baden (bah den or bad'en).
Ba hā'ma (or ba hah'ma).
Bahia (bah ē'ah).
Bahrein (bah rīn').
Baikal (bī'kahl).
Baireuth (bī'ruth).
Balaklava (bah lah klah'vah).
Balize (ba leez').
Balkan (bahl kahn').
Balmoral (bal mor'al).
Baltic (bawl'tic).
Bang kok' or **Ban kok'.**
Barataria (bah ra tah'rī a).
Bar ba'does (-dōz).
Barcelona (bar se lō'nah).
Barnaul (bar nowl').
Basle (bahl).
Bas so rah' (or bas sō'rah).
Baton Rouge (bat'on roozh).
Bayonne (bah yon').
Bayou la Fourche (bī'oo lah foorsh).
Beaufort (bō'furt; Br. Dom.
Beaufort (bū'furt; S. C.).
Bed oin (bed'oo ēn).
Behring (bē'ring).
Beled el jerid (bel ed el jer eed').
Belem (be lem' or bā leN').
Bel gi'um (bel'je).
Bel oo chis tan'.
Bel grade'.
Benares (ben ah'rez).
Bengal (ben gawl').
Benguela (ben gā'lah).
Benin (ben ēn').
Bergen (ber'ghen).
Ber'lin or Berlin'.
Ber mu'das.
Berne (bern).
Ber nard'.
Berwick (ber'rik).
Besançon (beh zăN soN').
Bezar (bē'har).
Beyrout (bā'root).
Bhotan (bo tahn').
Biafra (bē af'rah).
Bingen (bing'en).
Binghamton (bing'am ton).
Bisheim (bis'hīm).
Bogota (bo go tah').
Boise (bwah'zay).
Bokhara (bo kah'rah).
Bo liv'ia.
Bologna (bo lōn'ya).
Bonifacio (bon e fah'cho).
Bonin (bo nēn').
Bordeaux (bor dō').
Bor'ne o.
Bos po'rus.
Boulogne (boo lōn').
Bourbon (boor'bon).
Bossa Se... bay [illegible]
Bourges (boorzh).
Brahmapootra [illegible]
Brazil (bra zil').
Brazos (brah'zōs).
Brem'en (in U. S. Bre'men).
Bres lau (bres'law or low).
Brescia (bresh'e a).
Brindisi (brin'de se).
Brisbane (briz'bane).
Bruges (broozh).
Bu da.
Buenos Ayres (bwā'nos ī'res).
Bucharest (bū'ka rest).
Bur mah.
Bushire (boo shēr').
Butte (būte).

C.

Cabool (kah bool').
Caen (or kahN).
Caernarvon (ker nar'von).
Cagliari (cal'yah re).
Cairo (kī'ro; in U. S. kā'ro).
Calais (kal'is; Fr. pron. cal ay').
Calcasieu (kahl'ka shoo).
Caldera (kal dā'rah).
Caliente (cahl e en'tā).
Callao (kal lah'ō, or kal yah'ō).
Campagna (cam pan'yah).
Can a da.
Canandaigua (can an dā'gwa).
Canary (can ai'ry).
Can da har'.
Ca nav er al.
Cañon (can yōn').
Can ton' (in U. S. can'ton).
Cape Breton (or brit'n).
Caracas (kah rah'cas).
Car da'mom.
Carlsruhe (carls'roo).
Cartagena (car ta jē'na).
Cassiquiare (cah se kē ah'rē).
Catoche (kah tō'chay).
Cauca (cow'cah).
Cau ca'sus.
Catamarca (cah tah mar'kah).
Cayenne (kī en').
Celebes (sel'e bēz).
Cette (set).
Cettinje (chet tēn'yā).
Ceuta (sū'tah).
Cevennes (sā ven').
Ceylon (sē'lon, or se lon').
Chagres (chah'gres).
Chamouni (sha moo nē').
Champlain (sham plān').
Chartres (shartr).
Charybdis (ka rib'dis).
Chautauqua (shar au'qua).
Chat ta hoo'che.
Chaudière (sho de air').
Chelmsford (chems'ford).
Chelsea (chel'se).
Chemnitz (kem'nits).
Chemung (she mung').
Chenango (she nang'go).
Cherapungee (cher ah poon jee).
Cherbourg (sher'boorg).
Chersonese (ker so nēs').
Che'sa peake.
Cheyenne (shī en').
Chicago (she caw'go).
Chili (chil'le).
Chimborazo (chim bo rah'zo).
Chin cha.
Chihuahua (che wah'wah).
Chil li coth'e.
Chios (kī'os).
Chip pe wā.
Chotliegh [illegible]
Chuquisaca [illegible]
Choquisaca (choo ke sah'kah).
Cienfuegos (se en fwā'gōs).
Cincinnati (sin sin nah'tī).
Clyde (klīd).
Cyclades [illegible]
Cobija (ko bē'hah).
Cohoes (co hōz').
Coimbra (co im'bra).
Cologne (kō lōn').
Colorado (col o rah'do).
Comayagua (ko mī ah'gwa).
Comorin (kom'o rin).
Con cho.
Connecticut (con net'e cut).
Constantine (kon stan tēn').
Copiapo (ko pe ah po').
Co pen hā'gen.
Coquimbo (ko kēm'bo).
Cor dil le ra (Sp. cor dēl yā'rah).
Cor'do va.
Corea (co rē'a).
Cor ri en tes.
Coregonia (ko rē ghē nah).
Cossitot (cos'se tot).
Costa Rica (kos'tah rē'kah).
Cotopaxi (co to pax'e).
Cracow (krah'ko).
Cronstadt (krōn'staht).
Covington (kuv'ing ton).
Crimea (cri mē'a).
Cueva de Vera (kwā'vah dā vā'rah).
Cumana (ku mah nah').
Cumbre (koom'brā).
Curaçoa (ku ra so').
Cuyaba (coo ya bah').
Cuzco (koos'ko).
Cyclades (sik'la dēz).
Cy prus (sī'prus).

D.

Dab'sun' ē gs.
Dahomey (da hō'mā).
Dakota (da ko'ta).
Dalton (dawl'ton).
Darmstadt (darm'stat).
Dardanelles (-nelz').
Darfur (dar foor').
Da rien'.
Dauphine (dō fē nā').
Dee'can.
Decatur (de cā'tur).
Delgado (del gah'do).
Delhi (del'hī in U. S. del'hī in Asia).
Des Moines (dā moin').
De troit'.
Dhawalaghiri (da wol a ghē're).
Diamantina (de ah mahn tē'nah).
Diarbekr (de ar'bekr).
Dieppe (de ep').
Dijon (de zhoN').
Dnieper (nē'per).
Dniester (nēs'ter).
Do vre field.
Dominica (dom e nē'kah).
Donna Ana (ah'nah).
Dor ches ter.
Dordogne (dor dōn').
Dorpat (dor'pat).
Douai (doo ā').
Doubs (doo).
Douro (doo'ro).
Drontheim (dront'hīm).
Drave (drahv).
Dubuque (du būk').
Dumfries (dum frēs').
Dun bar'.
Dus sel dorf.
Dwina (dwē'nah).

E.

Ecuador (ek wa dōr').
Edgecumbe (ej'kum).
Ed in burgh (or burro).
Ed is to.
Egripo (ā grē'po).
Elba (el'bā).
Elbœuf (el beuf).
El Dorado (do rah'do).
El Gran Chaco (chah'co).
El Obeid (o bā'id).
El Paso (pah'so).
Elsinore (el se nōr').
England (ing'land).
Enikale (en e kah'lā).
Erfurt (er'foort).
Erlangen (er'lang en).
Erie (ē'ri).
Esquimaux (es'ke mō).
Essequibo (es se kē'bo).
Espinhaço (es pin yah'so).
Estacado (es tah kah'do).
Estremadura (es trā mah doo'rah).
Etienne (ā te en').
Eufaula (yoo faw'la).
Eu phra'tes (yoo fra'tēz).
Eu rō'pa.
Eux ine (yūx'in).
Evreux (ev rö').
Ev o ra.
Ex e ter.
Eyre (air).

F.

Faribault (fār'e bō).
Falkland (fawk'land).
Fa roe (fā'ro).
Fauquier (faw kēr').
Fayal (fī awl'; Port. fī ahl').
Fayoom (fī oom').
Felipe (fā lē'pā).
Fernandina (fer nan dē'nah).
Ferrara (fer rah'rah).
Ferrol (fer rōl').
Fez zan'.
Fiesole (fe ā'so lā).
Fingal (fing'gawl).
Finisterre (fin is tair').
Fiord (fe ord').
Fiume (fe oo'mā).
Fond du lac (foN dū lac).
For mo'sa.
Foo chow.
Freiburg (frī'boorg).
Fusiyama [illegible]
Fuegos (fwā'gōs).
Funchal (foon shahl').
Fortescue [illegible]
Fusiyama (foo se yah'mah).

G.

Gal'a pa gos (gal a pah'gōs).
Ga lat'z (-lāts').
Galicia (ga lish'e a).
Gallinas (gal lē'nas).
Galway (gawl'way).
Ganges (gan'jēz).
Garonne (gah ron').
Ge ne'va.
Ge noa (jen'o a).
Ge'ro na.
Geysers (gī'zers).
Ghauts (gawts).
Ghent (Fr. gaN).
Ghizeh (ghē'ze).
Gib ral tar (jib rawl'tar).
Gila (hē'la or hē'lah).
Gloucester (glos'ter).
Go'bi (gō'bē).
Godavery (go dah've re).
Gotha (go'tah).
Göttingen (ghet'ting en).
Gracias a Dios (grah'se as ah dē'ōs).
Granada (gra nah'dah).
Greenwich (grin'ij).
Greytown [illegible]
Griesbach (grēs'bak).
Grisons (grē zoN').
Gros Ventre (grō vaNtr).
Guadalaxara (gwah dah lah hah'rah).
Guaymas (gwī'mahs).
Guadalquivir (gwah dal kwiv'er or gwah dahl ke vēr').
Guadaloupe (gwah da loop').
Guardiana (gwah de ah'nah).
Guanabacoa (gwah nah bah ko'ah).
Guanajuato (gwah nah hwah'to).
Guardafui (gwar dah fwē').
Guatemala (gwah te mah'la).
Guayaquil (gwī ah kēl').
Guelph (gwelf).
Guernsey (ghern'zy).
Guerrero (gher ray'ro).
Guiana (ghē ah'na).
Guienne (ghē en').
Guinea (ghin'e).
Guyandotte (gī an dot').

H.

Hadramaut (hahd rah mowt').
Hague (hāg).
Hainan (hī nan').
Hakodadi (hah ko dah'di).
Hala (hah'lah).
Ham'mer fest.
Han'o ver.
Hat'te ras.
Havana (ha van'ah).
Havre (hah'vr).
Havre de Grace (hah'ver de grahs).
Hawaii (hah wī'ee).
Hayti (hah'ye).
Hayti (hā'te).
Hebri des (-dēz).
Hed jaz'.
Heidelberg (hī'del berg).
Helena (hel'e na; Ark., he lē'na for the Island St. Helena).
Hel sing fors.
Hen lo pen.
He rat'.
Her cu la'ne um.
Hernhut (hern'hoot).
Himalaya (him a lā'ya, or him ah'la ya).
Hin doo stan', or **Hin do stan'.**
Hoang Ho (whong' hō).
Hobo'ken (hō'ken).
Holy head.
Holyoke (hōl'yōk).
Hon du ras.
Honolulu (ho no loo'loo).
Hooghly (hoog'le).
Houston [illegible]
Hou sa ton'ic.
Houston (hūs'ton).
Hualaga (hwal yah'gah).
Huasco (whas'co).
Hue (hway).
Huelva (wel'vah).
Huesca (wes'kah).
Hum'boldt.
Hu'gu e.
Hyderabad (hī der a bad').

I.

I'da ho.
Iguape (ē gwah'pā).
Illimani (il ye mah'nē).
Imaus (ē mah'us).
Inagua (ē nah'gwah).
In di an'a.
In di an ap'o lis.
Indies (in'dēz).
Innsbruck (ins'brook).
Interlacken (in'ter lahk en).
I'o wa.
Iquique (ē kē'kay).
Iran (ē ran').
Irkutsk (ir kootsk').
Ir ra wad dy (or wad'dy).
Isere (ē zair').
Isar (ē'zar).
Is lip (ī'lip).
Ismailia (is mah ē lē ah).
Is pa han.
Iztaccihuatl (ēs tah se hwah'tl).
Itapua (ē tah poo ah').
Ivrea (ē vrā'ah).
Ixtaccihuatl (ēs tahk se hwah'tl).

J.

Jaen (hah en').
Jacinto (ja sin'to).
Jaf fa (or yaf'fa).
Jalapa (hah lah'pah).
Jal am nit ra (-ral).
Jamaica (ja mā'ka).
Jan Mayen (yahn mī'en).
Ja pan'.
Japura (hah poo'rah).
Jaroslav (yar o slav').
Jassy (yas'se).
Java (jah'vah).
Jebel Shammar.
Je na (or yā'nah).
Jiloca (he lo'kah).
Jo li et.
Jorullo (ho rool'yo).
Juan Fer nan dez.
Ju an de Fu ca (hwahn dā foo'kah).
Juggernaut (jug gher nawt').
Juniata (ju ni ah'tah).
Jungfrau (yoong'frow).
Ju ra (joo'ra).

K.

Kairwan (kīr wahn').
Kalahari (kah lah hah're).
Kal'a ma zoo.
Kamtchatka (kam chat'ka).
Kanawha (kan aw'wa).
Kan ka kee'.
Kano (kah'no).
Kar a kō rum.
Karl stadt.
Ka san'.
Kash gar'.
Kas kas kia.
Katah din.
Kearney (kar'ne).
Kearsarge (kē'sarj).
Kel at' (or ahť).
Ken'ia.
Keokuk.
Kerguelen (kerg'e len).
Ke wē'naw.
Khar to'um.
Khar koť.
Khiva (kē'vah).
Kiachta (kē ahk'tah).
Kiel (kēl).
Kiev (kē'ev).
Kilimandjaro (kil e mahn jar'o).
Kil'ar ney.
Kingkitao (king kē tah'o).
Kirghiz (kir gēz').
Kirkcudbright (kir koo'bre).
Kis singen.
Kit tan ning.
Kiusiu (ke oo'se oo).
Klamath (klah'mat).
Königgrätz (kē nig grāts).
Kön igs berg (kēn'igs berg).
Kooka (koo'kah).
Kor do fan'.
Kō ros sar.
Kuen Lun (kwen loon).
Kurdistan (koor dis tan').
Kurile (koo'ril or koor'il).
Ku ro Si wo (sē'wo).
Kur ra chee'.

L.

La Chine (lah shēn').
Lac qui Parle [illegible]
Lac'ca dive (-dīv).
Lado ga.
Ladrones.
La Fayette'.
La Guayra (lah gwī'rah).
Lahore (lah hōr').
La Mancha (mahn'chah).
Lanark [illegible]
Landes (lāNd).

M.

N.

O.

P.

Q.

R.

S.

T.

U.

V.

W.

X.

Y.

Z.

3781 P'

RECENT GEOGRAPHICAL EVENTS.

A supplement to Maury's Manual of Geography.

Standard Time.—Students of geography are familiar with the subject of "difference of time." The continental maps of Maury's Manual of Geography indicate what the sun time is on meridians 10 degrees apart when it is noon at Greenwich. Travellers by land and sea are only too familiar with the endless confusion to which difference of solar time gives rise. If we travel 15 degrees, or about 800 miles, toward the west, we find our watches are a whole hour too fast. The reverse is the case if we travel eastward. Practically it has been found necessary for railways running east and west to adopt, for the despatching of trains, the time of one of their termini, or of some intermediate point. In consequence of this there have been as many as fifty different standards of railroad time. By the railways centering in St. Louis as many as six were used. In many places it was necessary to have in hotels two clocks, the one keeping local time, the other railway time.

MAP OF THE UNITED STATES SHOWING STANDARD TIME BELTS.

To obviate the inconveniences arising from difference between local and railway time, what is known as "Standard Time" has been adopted in the United States. The country has been divided into four great time-belts, each about 15° wide. The local time of the central meridian of each belt is made the Standard Time for the entire belt.

The meridians determined upon are the 75th, 90th, 105th, and 120th west from Greenwich, and the time-belts are known as the Eastern, Central, Mountain and Pacific. Eastward of the United States is another time-belt known as the Intercolonial, having the time of the 60th meridian. As the meridians by which the time of the belts is determined are just 15° apart, it is clear that the difference of time in the different belts will be marked by exact hours, for the simple reason that the sun apparently passes over 15° of longitude every hour. There will be no difference so far as the minutes and seconds are concerned.

The accompanying map (see also map United States, pp. 28, 29) shows by different colors the different time-belts. Within each of these all places will have the same time. Thus when it is solar noon on the 90th meridian, it will be noon by Standard Time in all places throughout the Central belt. From the map we see that Eastern time, being determined by the 75th meridian, is just 5 hours slower than that of Greenwich, Central time 6 hours slower, and so on. Here and there deviations from the system are found expedient for the convenience of railways, and these are indicated on the map by the irregularity of the bounding lines of the belts.

To change local time to Standard Time, we must turn our clocks forward in places lying east of the time-meridian, backward in places to the eastward. The amount of the change will depend on the distance of the place from the time-meridian. Thus in New York City, which is about one degree eastward of the 75th meridian, clocks were turned back about four minutes; in Omaha, which is six degrees westward of the 90th meridian, they were turned forward twenty-four minutes. The change of time was generally made October 1[illegible], 1883.

Reckoning Longitude.—At the meeting of the International Geodetic Congress in Rome, held on the 16th of October, 1883, at which were present delegates from nearly all the countries of Europe and from the United States, a resolution was passed recommending to all governments of the civilized world, that they adopt a single initial meridian from which to reckon longitude. The meridian of Greenwich was the one recommended, because it is already in more general use than any other.

In connection with this subject it was further recommended that longitude henceforth be reckoned only from west to east, or in other words from 0° up to 360°; and that the hours of the day be counted from 1 up to 24.

It rests with the various governments of the world to accept or reject these recommendations.

Newfoundland.—A recent work on Newfoundland gives many facts of importance and interest concerning this island, of which, hitherto, we have possessed but meagre information. Newfoundland is not a region of utter gloom and inclemency. The fogs which curtain its coast do not usually extend far into the interior. The minimum reading of the thermometer for a period of eight years was 7°, the maximum 83° Fahr. Frost rarely penetrates deeper than a few inches.

No part of British America has finer grazing lands. The potatoes are unsurpassed. Magnificent forests of pine, beech, and spruce furnish ample materials for a large lumber trade. Among the products of the [illegible] the valuable evergreen called Labrador Tea, the leaves of which are used by the Indians and hunters in place of tea.

The annual catch of codfish is no less than [illegible] of this amount.

Newfoundland ranks as 6th among the copper-producing regions of the world. It has also mines of nickel, lead, iron and coal.

Greenland.—Baron Nordenskiöld has returned from his work of exploration in Greenland. The object of his expedition during the summer of 1883 was to ascertain the exact condition of the interior of Greenland. He conjectured that mountain chains engirdle the country, and he looked upon it as probable that the interior [illegible] was comparatively free from snow, and might, like certain portions of Siberia, be covered with abundant forest growth. He penetrated some distance into the interior, but only to find that his anticipations were altogether incorrect. So far as the expedition has any result, it is to confirm the old idea, that Greenland is an ice-clad barren wild.

Vegetation in the Northern Regions.—Lieut. Gibbon, of the *Proteus*, is said to have two or three books filled with floral specimens gathered on Disco Island, 70° north latitude. One resembles our poppy, and is a bright yellow flower with a brown centre. Another is identical with our bluebell. In addition to the flowers, mosquitoes abounded, and were as keenly venomous as those of summer time.

January, 1884.—Copyrighted, 1884, by the University Publishing Company, New York.

RECENT GEOGRAPHICAL EVENTS.

NOTE.—The preparation of a brief record of recent geographical events, a feature of the earlier editions of MACMILLAN'S MISCELLANY (see page 111), is discontinued in the REVISED EDITION.

Africa.—Mr. Stanley, under the auspices of the "African International Association," of which the King of the Belgians is the head, is busily engaged on the banks of the Congo. He has constructed a road round the Livingstone Falls, and has launched a steamer upon Stanley Pool, which is an expansion of the Congo, about 300 miles from its mouth. At various points in the valley of the river, stations have been established, which are designed to be at once centres of trade and of missionary enterprise.

M. de Brazza, representing the French Government, has obtained from certain African chiefs the cession to France of the territory bordering on the northern banks of Stanley Pool. He proposes to construct a railroad into the interior of Africa from a point on the coast north of the mouth of the Congo. Large supplies have been voted by the French Chamber of Deputies, and the entire matter has been placed under the direction of the Ministers of Foreign Affairs and Public Instruction.

Chili and Peru.—The result of the recent conflict between Peru and Bolivia on the one side, and Chili on the other, appears, according to the latest advices, to be that a treaty has been agreed upon which cedes to Chili, under certain conditions, all the territory west of the Andes and south of the river Camarones (latitude 19°), also the province of Tacna north of that river for ten years.

Growth of the United States.—Among the interesting facts brought to light by the last census is, that the population of the United States has multiplied itself by 16 in the course of the past century. In 1780 the population of the colonies, as nearly as can be ascertained, was about 3 millions. In 1880 it was about 50,000,000. It has doubled every 25 years. At the same rate of increase it would amount in another 25 years to 100,000,000, and, at the close of another century, to 800,000,000. It is considered, by some of the ablest statisticians, that such a result is not to be looked for. It would imply a population of 400 to each available square mile of territory; or, in other words, one-third as much again per square mile as the present population of Great Britain, and more than twice as much as that of France.

Bismarck has been selected as the capital of Dakota. The seat of government will probably be transferred from Yankton to that place.

Charleston, West Virginia, is to be the capital of that State in 1885.

Bullion Product.—The United States produces about 38 per cent. of the world's annual yield of gold and silver. The product for the year 1882 was: gold, $32,400,000; silver, $46,450,957; total, $79,351,617. It was sufficient to form the full cargo of a large modern vessel.

The Sahara.—Between the Mediterranean and the depressed portion of the Sahara which M. de Lesseps desires to inundate, so as to form an inland sea, lie, what are known as the "chotts" (ch-t). They are salt marshes, which form an almost unbroken chain 250 miles in length. Lying generally below the level of the Mediterranean, they might, without difficulty, be made portions of a canal, by which M. de Lesseps proposes to effect his scheme of inundation. He claims that all the land which would lie to the northward of the proposed sea would be rendered fertile, and that its climate would be greatly modified.

Greenland.—Baron Nordenskiöld has began his work of exploration in Greenland. The object of his expedition is to ascertain, during the summer of the present year, the exact condition of the interior of Greenland. He conjectures that mountain chains engirdle the country, and he looks upon it as a probable thing that the interior Inuland may be comparatively free from snow, and may, like certain portions of Siberia, be covered with abundant forest growth.

His expedition sailed from Gottenburg in the latter part of May, 1883, and is expected to start on its return in September next.

June, 1883.

Aboriginal Population of Canada and Alaska.—A recent Canadian report on the aboriginal population of the Dominion, together with the information obtained from our own late census returns in Alaska, enable us to estimate with considerable accuracy the total number of the aboriginal population of British America and Alaska.

The Esquimaux or Oranian element comprises about 26,000. The Indian number about 120,000. In other words, the total aboriginal population of this area is not far from 150,000.

Newly Discovered Andean Pass.—Hitherto the most frequented pass over the Chilian Andes has been that of La Cumbre, 12,800 feet above the sea. Recent intelligence informs us of the discovery of a pass which has long been known to the Indians, but which, it appears, has been kept secret by them. No measurements of its altitude have been made, but it is altogether probable that it is lower by several thousand feet than the pass of La Cumbre. It is named the Bariloche Pass. A railway traversing the pampas and crossing the pass would connect Chili and the Argentine Republic by a line very much shorter than the railway now under construction between Buenos Ayres and Santiago. Such, moreover, is the position of the Bariloche Pass that it would probably be exempt from obstructions by snow.

Corea.—In October, 1882, Mr. Hall, the British Consul at Nagasaki, Japan, visited Soul, the capital of Corea. Navigation of the Corean coast is dangerous, from the shallowness of the water and the heavy fall of the tides averaging 30 feet. In addition to these difficulties, dense fogs prevail in the summer and shore ice obstructs the harbors in winter.

Soul is about 50 miles inland. It is a squalid town of low mud and stone houses. Population about 240,000. Between Soul and the place where Mr. Hall landed, the country is barren and almost treeless.

The entire population of Corea, according to the Government census, is about 6,842,000.

The White Sea.—The commerce carried on upon the White Sea presents strikingly interesting statistics. In 1881, four hundred and seventy vessels employing over 2,000 men, were engaged in it. In 1882, these numbers were largely increased. The articles of trade are chiefly the products of the White Sea fisheries.

The Obi.—Commerce upon the Obi has grown with surprising rapidity. There are more than 50 steamers plying upon the waters of this Arctic stream whereas in 1854 there were but two. For the further promotion of Siberian trade it is now proposed to cut a canal, in about latitude 58°, to connect the Obi and the Yenisei.

Mexico.—While the Pacific Railway of Canada is being rapidly pushed to its completion, the rails are also being laid along the plateau of Mexico, and bringing that Republic into closer communication with the United States. Within a year trains will be run through to the City of Mexico. The equable climate of this capital will probably render it a favorite resort of visitors.

Papua.—Hitherto little has been known of Papua, or New Guinea, beyond the mere fact of its being one of the largest islands in the world, and being occupied by races who seem akin to the negro. Recently projects for the colonization of the island on a large scale have found favor in Australia, and New Guinea is likely to become another jewel in the crown of Great Britain. An English mission has been established at Port Moresby, on the Gulf of Papua, and native teachers have already been sent from this central station to other suitable points.

Polynesia.—Dr. O. S. Finsch has recently returned to Europe from a tour among the islands of the Pacific. He reports that the peculiarities of the natives are fast passing away under the influence of missionaries and traders. The inhabitants of the Marshall Islands, for example, have already abandoned, and, it would appear, forgotten, the art of making canoes from the trunk of the bread-fruit tree. On many of the islands the native population is rapidly declining.